PROSIMUTILS

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(WPSlider)

User Manual

Manual Version 1.2.0.a

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1. Introduction

1.1 ProSim737

The ProSim737 suite is a complete set of software tools to build an accurate two engine simulator. In combination with Microsoft Flight Simulator 9 or 10, it will allow you to build a setup that is very close to the real aircraft.

Read more at http://www.prosim-ar.com

1.2 Hoppie Network

The Hoppie ACARS Network is a Web application that enables people with an ACARS client to send each other messages via the ACARS protocol.

This message relay service is asynchronous (not in real time, i.e., both parties do not have to be online at the same time) and not via the VATSIM/IVAO network.

Read more at http://www.hoppie.nl/acars

1.3 IVAO

The International Virtual Aviation Organization™ is a dedicated, independent, free of charge, service to enthusiasts and individuals enjoying and participating in the flight simulation community worldwide. The International Virtual Aviation Organization™ was formed to supply high quality services to its users on demand

Providing the Flight Simulation community a highly realistic aviation environment is IVAO's prime objective. This includes a real-time system for online flying (as pilot) and controlling (as air traffic controller), databases with aviation information, and organizing training and online events.

Read more at http://www.ivao.aero

1.4 VATSIM

The Virtual Air Traffic Simulation Network, known as VATSIM.net or "VATSIM" was created in 2001 by a group of individuals who came together with a goal of creating an organization which truly served the needs of the flight simulation and online air traffic control community. With an eye towards more than just providing a network of computers for users to log into, VATSIM is an online community where people can learn and, at the same time, enjoy the pastimes of flight simulation and air traffic control simulation all while making new friends from all over the world.

VATSIM is not just for individuals who have experience in online flight simulation and ATC. It is perfect for both the new user, and the long time "simmer".

For someone who has just learned about online flight simulation and air traffic control and is interested in real world procedures, VATSIM and its members, many of whom bring real world experience and expertise to our community, offer an ideal environment to learn real world skills.

For pilots, you'll be able to fly with radar service by air traffic controllers who issue instruction and assistance in all phases of flight from getting your clearance to arriving at your destination airport.

For air traffic control enthusiasts, the entire world is simulated meaning you can work ATC virtually anywhere from a general aviation airport to the busiest airports in the world. Nearly all of the real world positions are available for you to choose and learn to work.

Read mode at http://www.vatsim.net

1.5 TOPCAT

TOPCAT is an acronym for **Take-Off and Landing Performance Calculation Tool** It is a highly realistic, easy-to-use planning tool for all serious flight simulator enthusiasts.
It brings into a single application all of the calculations required to plan for safe and repeatable take-offs and landings.

TOPCAT will provide you, the captain, with Load Sheets, Take-Off and Landing performance analysis, Individual Runway Tables including all relevant speeds (V1, VR and V2), optimum thrust and flaps configurations, de-rated and assumed/flex temperatures and stop margins.

TOPCAT is similar to real-life software and was developed by professional airline pilots.

Read more at http://www.flightsimsoft.com/topcat/

2. Requirements

2.1 Minimum System Configuration (.NET 4 Requirements)

- 1GHz Processor
- 512MB RAM
- 850MB(32 bits SO) or 1.5GB(64 bits SO) of Hard Disk space

2.2 Operating System (.NET 4 Requirements)

- Windows XP SP3(XP starter, tablet, reduced and media center editions not supported)
- Windows 7

2.3 Other Requirements

- Microsoft .NET 4
- Flight Simulator X (it may works with FS2004 and P3D but not tested)
- Registered copy of FSUIPC
- WIDEFS where applicable
- ProSim737 Suite(it works with the non-registered version)
- Windows Installer 3.1 or later (.NET 4 requirement)
- Internet Explorer 5.0.1 or later(.NET 4 requirement)
- Internet Connection
- IVAO Network account (if applicable)
- Hoppie Network Logon code (if applicable)
- TOPCAT to receive performance data directly into the ProSim CDU. If using embedded TOPCAT module, TOPCAT version 2.7.3 or later is required.

2.4 ProSim737 version compatibility

ProSimUtils 1.2.0 requires ProSim737 Version 1.36b35 or later to get full functionality.

Check constraints when using ProSim737 previous versions:

1. 1.36b35 or earlier
    a. Behavior is completely unreliable and ***ProSimUtils is considered NOT COMPATIBLE.*** Support will ***NOT*** be provided for earlier versions.

3. ProSimUtils Software Change Log

- **01/JUN/2014 (Version 1.2.0)**

[FIXED]
DLM900
- Weather retrieval now accepts only 4 chars [A-Z] strings

PROSIM
- Status OK even if Prosim.exe file not found.
- Application crash with the popup window alerting the user that prosim.exe was not found.

HOPPIE
- fixed performance data using the callsign when tailnumber selected in hoppie config

IVAO
- IVAP window detection for FS2004(FS9) fixed

[NEW]
SYSTEM
- Code optimizing
- new TEMP folder to hold temporary files downloaded from the internet

DLM900
- Company information added
Company Name
ICAO code
IATA code
- Print system added
PRINT action available only when printer available in config
option to print messages automatically as they arrive
option to control width of the printer (in columns)
- SENSORS added
SENSORS state change logged at debug level.
- OOOI events added with FLIGHT and BLOCK times calculation
- INIT / DELAY / POST Advisories triggered

PROSIM
- Further warning messages added to ProSim STATUS box (PROSIM.EXE NOT FOUND / MYCUSTOM NOT SELECTED)

HOPPIE
- Company Code is now read only. Value must be set globally in DLM900 module

- Hoppie REQUESTS LSK now depends on HOPPIE MODULE status and not if RTE page is set.

IVAO
- IVAP module renamed to IVAO. IVAP module is now a sub-module of IVAO. *Due to this, if you use IVAP/IVAO module, you need to enable it again.
- IVAO option to config the status.txt file location.
- Status.txt and Whazzup files are downloaded to local drive.
- IVAO weather paths are retrieved from the status.txt file

VATSIM
- First implementation
- VATSIM option to config the status.txt file location.
- Status.txt and Whazzup files are downloaded to local drive.
- VATSIM weather paths are retrieved from the status.txt file

TOPCAT
- Added XW/HW to Take off performance

[ACARS]
*ACARS files are no longer in a ZIP file. There is a new folder ACARS. During Installation, files will be copied to the destination folder.
*Colors are now supported

AOC
AOC->MISC->ACARS STATUS->PROG ID/SENSORS page working
AOC->OOOI working
AOC->WX REQUEST with option to choose weather source if either online network if enabled(IVAO/VATSIM)
AOC->PREFLIGHT->WT/BALANCE with actual weight information (ZFW/GW/FUEL/PAYLOAD)
REQUEST LOADSHEET LSK available on AOC->PREFLIGHT->WT/BALANCE if HOPPIE module active and with status OK

HOPPIE
- company code fixed in ACARS pages

VATSIM
- pages created

- ## 05/APR/2014 (Version 1.1.0)

[FIXED]
SYSTEM
- All status indicators in RED if ProSim not running when opening ProSimUtils
- FS connection not handled correctly if ProSimUtils is started before FS

HOPPIE
- Manual position report fixed (INVALID TYPE message)

[NEW]
SYSTEM
LOG
-Added an "UPDATE ONCE" button to the Log window
-Added a button to purge log and debug files
-Added a checkbox to allow automatic refresh of the log window

IVAP
-Shorttaf weather now supported

OTHERS
-Application Icon added
-Main window reworked
-Added a menu to the main window
-New status indications
-Added the possibility to copy and configure ACARS files automatically.
-Backup is done when copying new XML files
-Added a simple web interface to send text messages to the CDU with associated Advisory
-Added global delay option to simulate transmission delays

TOPCAT
-New Module

DLM900
-New Module

[ACARS]
MESSAGING
-MESSAGING MENU is now available in DLNK -MENU page

AOC
-All pages rebuilt
-possibility to retrieve METAR and TAF together up to 3 stations at a time

TOPCAT
-New Module (TAKE OFF and LANDING pages)

- ## 05/MAR/2014 (Version 1.0.2)

FIXED
INVALID TYPE message when trying to get new messages
"%20" between two lines when sending IVAP message from the CDU

SYSTEM
Added to application title the local IP addresses and port where ProSimUtils is working

ProSimUtils will display a message if ACARS files are not in ProSim737/ACARS folder
ProSimUtils will display a message if myCustom is not selected in ProSim737->Config->ACARS->Profile

ACARS
HOPPIE
- Added a RETURN LSK to message uplink
- ADSC page now updates status directly (Requires ProSim737 V1.35b21 or later)
IVAP
- SEND TEXT MESSAGE PAGE now resets all fields when selected (Requires ProSim737 v1.35b20 or later)

- ## 03/MAR/2014 (Version 1.0.1)

FIXED
-FMS status RED if using ProSim737 version older than 1.35b20

LOG
-Added ProSim737 Version to initialization log
-Added .NET version to initialization log
-Added OS version and Architecture to initialization log
-Added further logging information when checking FMS status

- ## 28/FEB/2014 (Version 1.0.0 - FIRST RELEASE)

4. Installation

4.1 Main program

The application is available as a ZIP file. Extract its contents to a folder of your choice.

In ***Fig 4.1.a*** we can see the contents of the extracted zip file.

- Templates folder – Folder where templates are located
- ACARS folder - Set of XML ACARS files
- changelog.txt – Road map with all versions changes
- FSUIPCClient.dll – Required library to connect to FS using FSUIPC
- Ionic.Zip.dll – Required Library
- Newtonsoft.Json.dll – Required library
- ProSimUtils.exe – Main program
- ProSimUtils.pdb – Main program extension
- WebSocket4Net.dll – Required Library

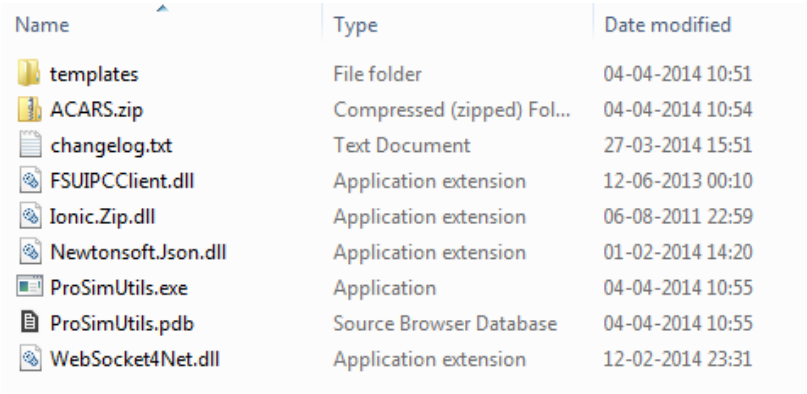

Fig 4.1.a

After running the application, three new folders will appear. One for log files (LOG) and another for debug/fatal errors (ERROR). The last folder is a temporary folder to hold temporary files downloaded from the internet.

ProSimUtils can be installed on the same PC as FS/ProSim737 or in another networked PC using WIDEFS.

There is only one restriction for users of the IVAP sub-module and TOPCAT module. TOPCAT and IVAP user interface window must be in the same PC as ProSimUtils to allow communication between applications.

4.2 XML ACARS files

Included with ProSimUtils is an ACARS folder containing a set of xml ACARS definition files to allow a correct use of this application. You can install them manually or automatically.

4.2.1 Manual XML files installation

Copy the contents of the ACARS (***Fig 4.2.1.a***) folder to the ACARS folder inside the ProSim737 main module folder (***Fig 4.2.1.b***). ***Remember to backup any file you already have in there before copying.*** If the myCustom.xml is not found in the correct location, a message will be displayed to the user.

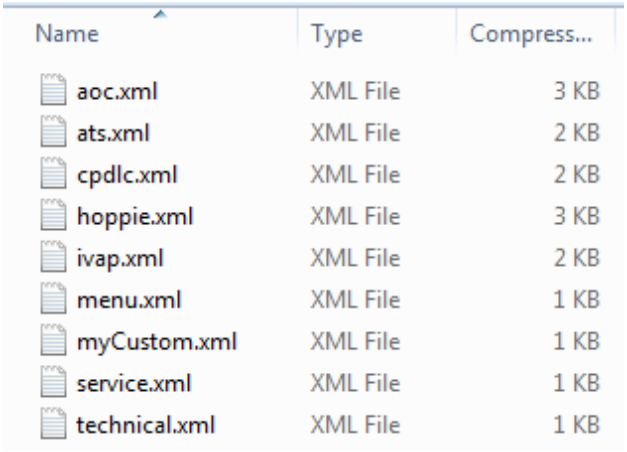
Name
Type
Compress...
aoc.xml XML File 3 KB
ats.xml XML File 2 KB
cpdlc.xml XML File 2 KB
hoppie.xml XML File 3 KB
ivap.xml XML File 2 KB
menu.xml XML File 1 KB
myCustom.xml XML File 1 KB
service.xml XML File 1 KB
technical.xml XML File 1 KB

Fig 4.2.1.a

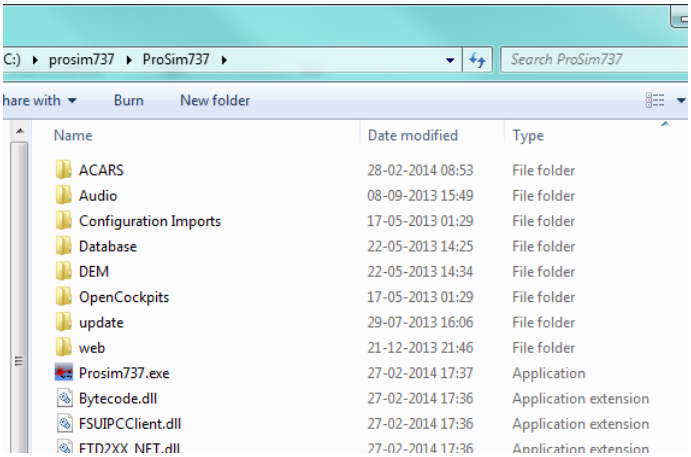

Fig 4.2.1.b

4.2.2 Automatic XML files installation

After basic configurations are complete (PROSIM Folder correctly set), select the tools->install ACARS files in ProSimUtils menu. More info on item ***5.1.2.1***

5. Configuration

5.1 First Run

5.1.1 Main Application

The first time ProSimUtils is executed, it will create a default config.xml file, marked in red in ***Fig 5.1.a***, in the same folder as ProSimUtils is located (***Fig 5.1.a***) and warn the user that prosim737.exe is not found. This happens because it will load a default c:/prosim737 setting for prosim737.exe location and if it is not located there, a warning is shown.

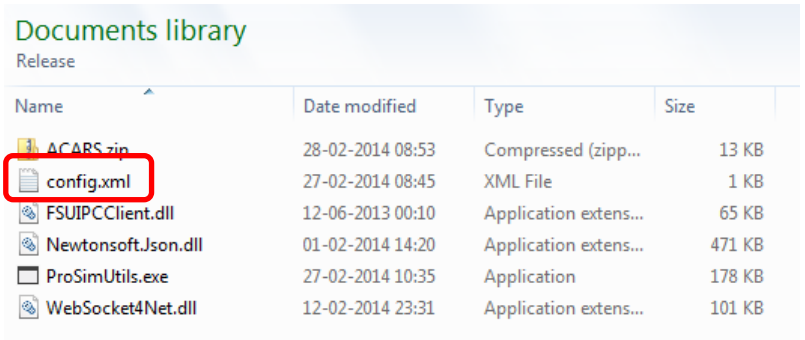

Fig 5.1.a

5.1.2 ACARS Files

Before using the application we must install ACARS XML files and configure ProSim737 to use our new set of ACARS files.

5.1.2.1 Install ACARS XML Files

After configuring the application, mainly the ProSim737 Folder, you just need to select Tools->Install ACARS Files from the menu (***Fig 5.1.2.1.a***).

A backup will be done automatically with all files and placed inside a backup directory (***Fig 5.1.2.1.b***). The filename represents the application version that made the backup and the date and time of the backup.

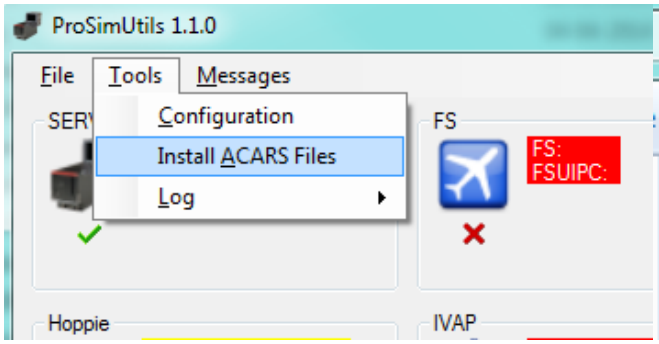

Fig 5.1.2.1.a

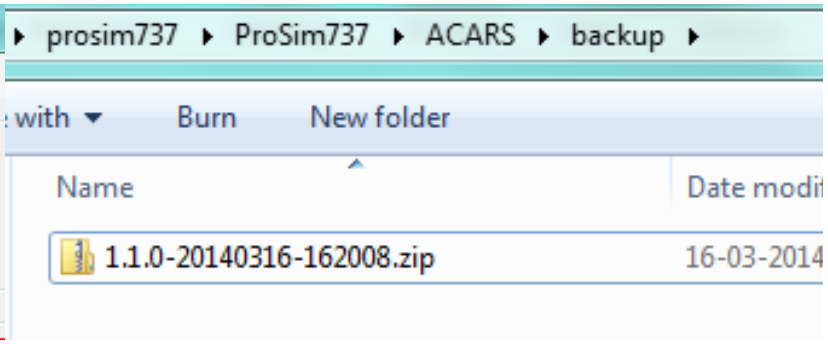

Fig 5.1.2.1.b

5.1.2.2 ProSim737 Configuration

Select myCustom as ACARS profile in ProSim737 System->Configuration->ACARS (***Fig 5.1.2.2.a***) to make all new pages available in the CDU.

If myCustom is not selected when running ProSimUtils, a warning will be shown to the user.

After changing ProSim737's configuration, a restart will be needed.

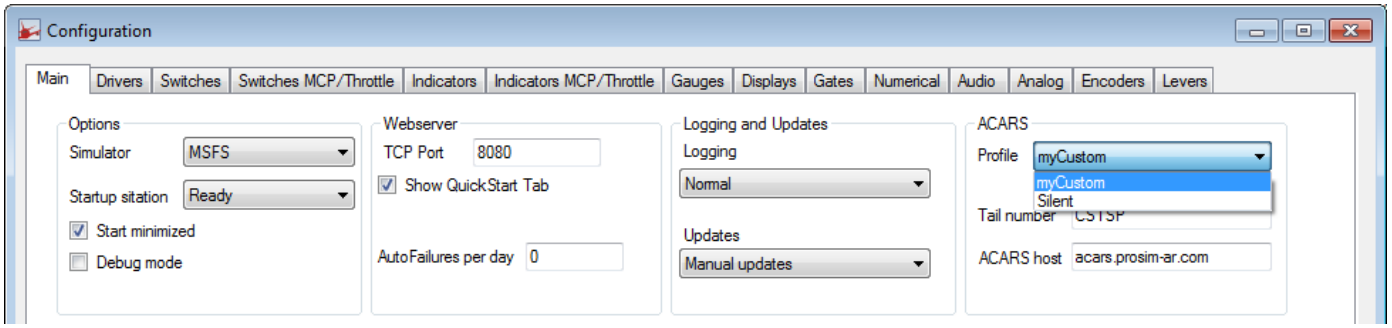

Fig 5.1.2.2.a

5.2 Access the configuration window

To access the configuration window, select the ***Configuration*** in the ***Tools*** menu (***Fig 5.2.a***).

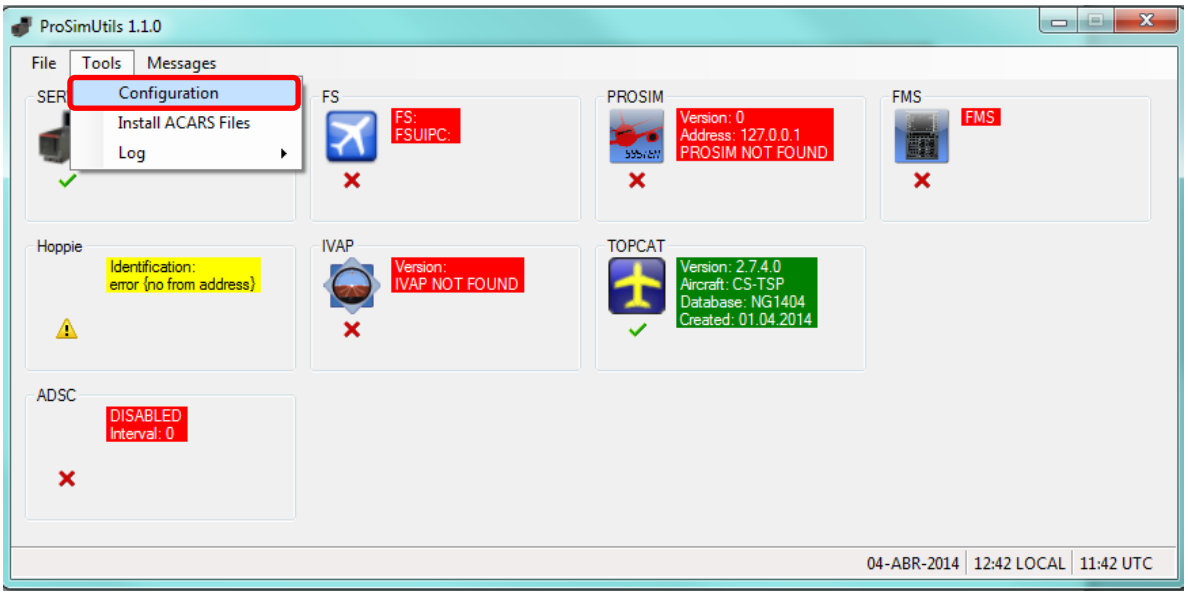

Fig 5.2.a

5.3 System configuration (Fig 5.3.a)

Here we should configure the following:

1. Main->Log Level: Defines the minimum log level that will be logged. Default: VERB
   There are six levels:
   -DEBUG
   -VERB
   -INFO
   -WARN
   -ERROR
   -FATAL
2. Web Server->port: The port that will be used by internal webserver. Default: 8085
3. Modules: Enable/Disable optional modules
4. Options->Start Minimized: Check to start ProSimUtils in minimized mode. Default: False

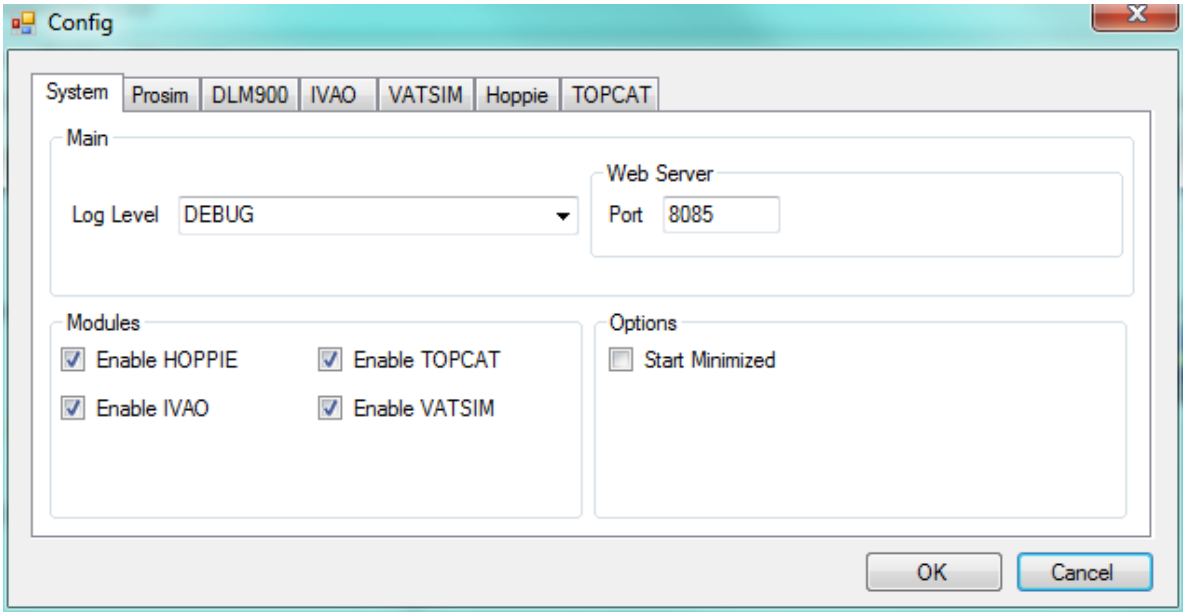

Fig 5.3.a

5.4 ProSim Configuration (Fig 5.4.a)

1. Main->IP Address: IP Address of ProSim737 Systems PC. You can find this info in ProSim737's help window (Fig 5.4.b). Default: 127.0.0.1
2. Main->Port: Port of ProSim737 Systems PC. You can find this info in ProSim737's help window (Fig 5.4.b). Default: 8080
3. Main->ProSim737 Folder: Folder where *ProSim737.exe* is located. It can be a local folder or a network share. Default: C:/
4. CDU->CDU message offset: The offset used to trigger an Advisory message in ProSim737 CDU. Default: 66c9
5. CDU->Uplink Method: Select the method to send messages to the CDU. PULL or PUSH HTTP.
   PULL: Uplink messages are hold in a NEW Queue and wait for a poll from the CDU to send all messages at once.
   PUSH HTTP: messages are immediately sent to the CDU
   Default: PULL
6. Options->Sync Doors: Enable to synchronize FS Doors with ProSim737 Doors. Default: False
7. Options-> Sync Doors text box: Value of first door element. Default: 121

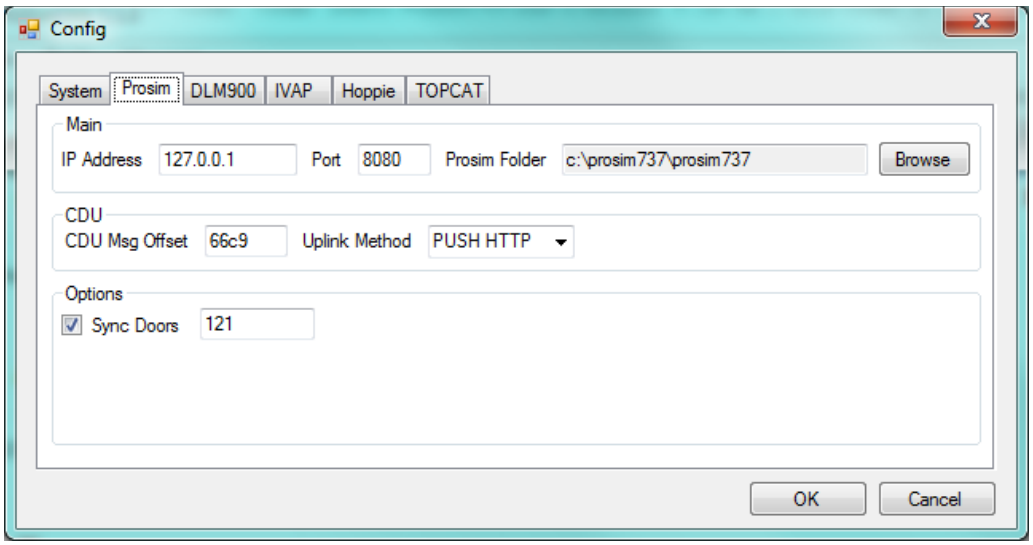

Fig 5.4.a

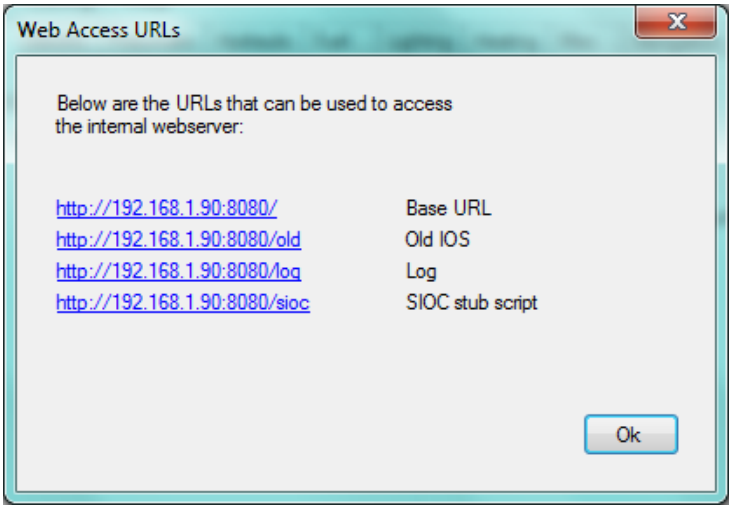

Fig 5.4.b

5.5 DLM900 Configuration(Fig 5.5.a)

1. System->Company->Company Name: Name of simulated airline
2. System->Company->ICAO: 3 letter code of the airline
3. System->Company->IATA: 2 letter code of the airline
4. Sources->METAR: Source for METAR messages. If you want to change to your own address, use {STATION} as variable to insert the ICAO code. Default: NOAA address
5. Sources->TAF: Source for TAF messages. If you want to change to your own address, use {STATION} as variable to insert the ICAO code. Default: NOAA address
6. System->Printer->Enables: Select to enable the printer. If used alone will enable the PRINT prompt in ACARS pages
7. System->Printer->Auto Print: Enable auto-print of uplinked messages
8. System->Printer->Name: Selects the printer
9. System->Printer->Cols: Width of the print in columns
10. System->Options->Enable VHF3: for future use. Default: always enabled
11. System->Options->Enable HF Radio: for future use. Default: disabled
12. System->Options->Enable SATCOM: For future use. Default: disabled
13. System->Options->Data COM: Selects which communication method is used to send ACARS messages. For future use. Right now it only selects which message is shown when sending an ACARS downlink (VHF IN PROG/HF IN PROG/SATCOM IN PROG). Default: VHF3
14. System->Options->COM Delay: Value used to simulate transmission and processing delays. The delay applied will be a number in seconds between the delay value plus or minus half the delay. If we choose 10 as delay, delay value will vary between 5 to 15 seconds. Default: 0 (DISABLED)
15. System->Options->Apply COMDelay: Enable the transmission delay simulation to hoppie messages. Default: False

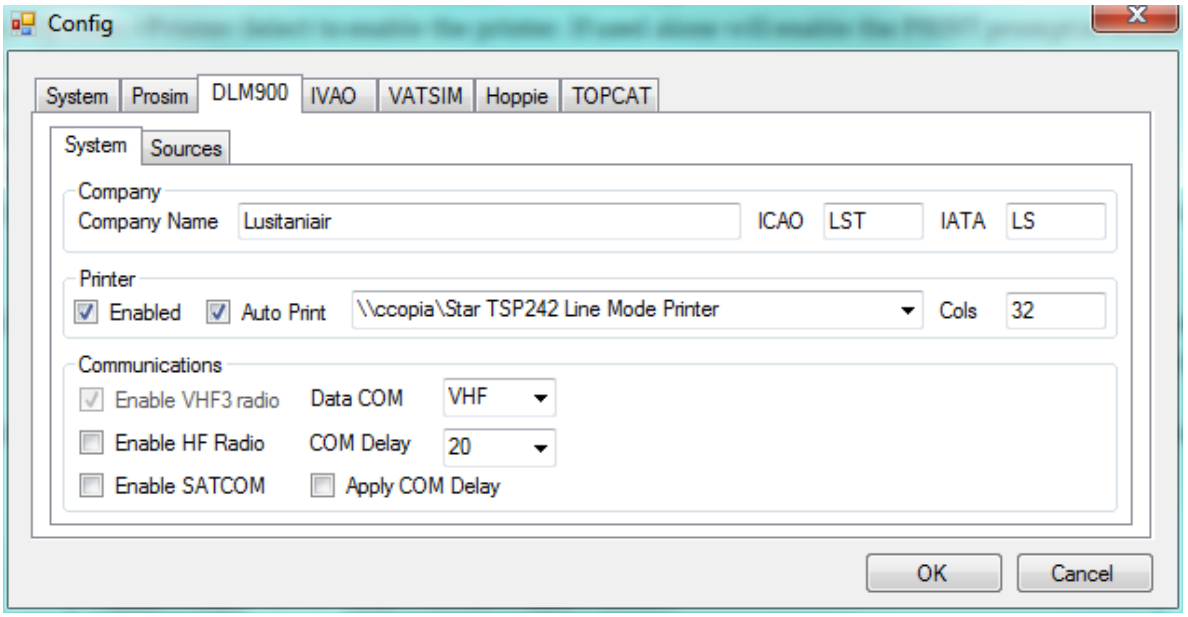

Fig 5.5.a

5.6 IVAO Configuration (Fig 5.6.a)

1. Main->Status address: Location to download the status.txt file
2. Options->IVAP Enabled: Enable IVAO CDU pages and communication to/from IVAO network.
3. Options->Received Messages: Method to receive messages from IVAP. For future use. Default: IVAP WINDOW

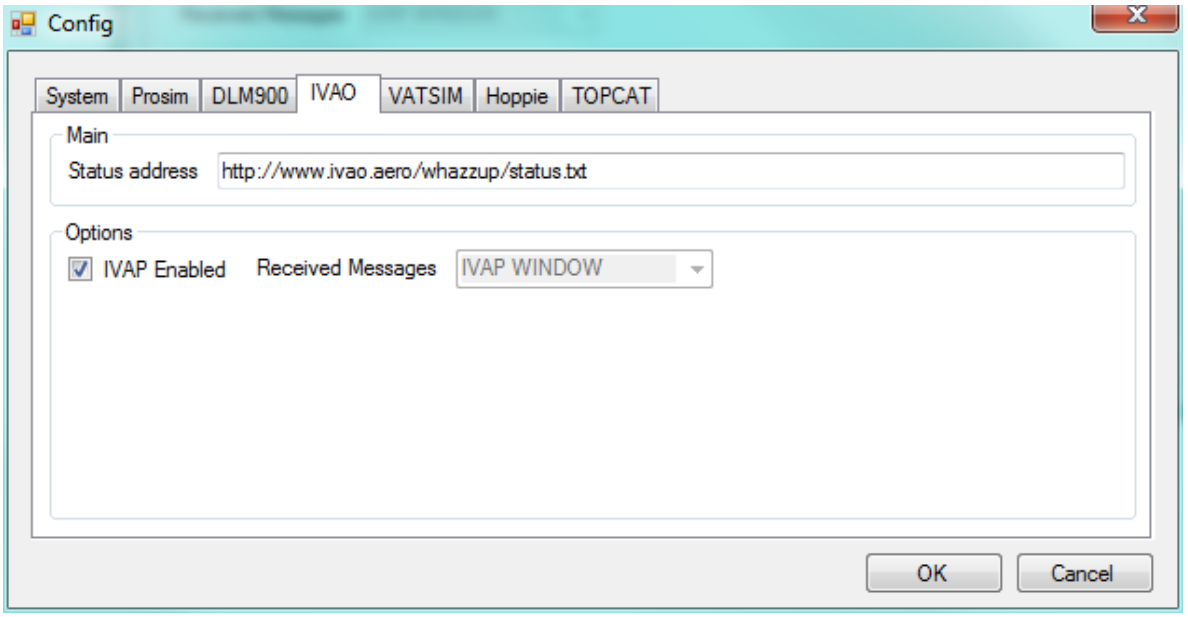

Fig 5.6.a

5.7 Hoppie Configuration(Fig 5.7.a)

1. Main->URL: connect address of Hoppie server. Default: http://www.hoppie.nl/flightline/acars/connect.html
2. Main->Logon Code: Hoppie logon code. Default: empty
3. Main-> Company Code: Hoppie company code. Read only. Displays the 3 letter code set up in the DLM900 module
4. Main->Polling Interval(in seconds): Polling interval to check for new messages in Hoppie Server
5. Options->Identification: Identification to use in Hoppie Network (FLIGHTID or TAILNUMBER). Default: FLIGHTID
6. Options->Accept PosReq: Enable to accept position requests. Default: False
7. Options->PosReq Auto Responder: Enable to automatically send the position request. Default: False
8. Options->Enable ADS-C: Enable to handle Hoppie ADSC messages. Default: False
9. Options->Apply COMDelay: Enable the transmission delay simulation to hoppie messages. Default: False

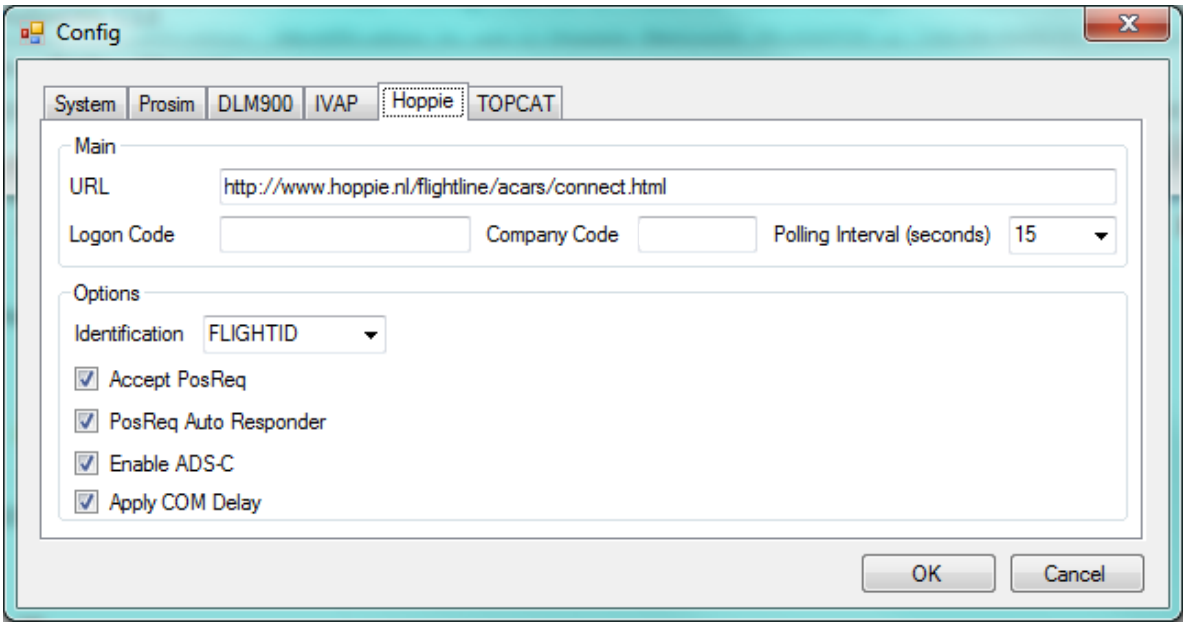

Fig 5.7.a

5.8 TOPCAT Configuration(Fig 5.8.a)

1. Main->TOPCAT.EXE Location: TOPCAT.EXE path found in windows registry. Default: Automatic
   An indication of version is displayed to confirm if the file was found and if it is the correct version.
2. Aircraft->Select Aircraft: A list of all 737 aircraft found in your TOPCAT program (***Fig 5.8.b***). Select one of the list.
3. Options->Apply COM Delay: Enable the transmission delay simulation to TOPCAT messages. Default: Disabled

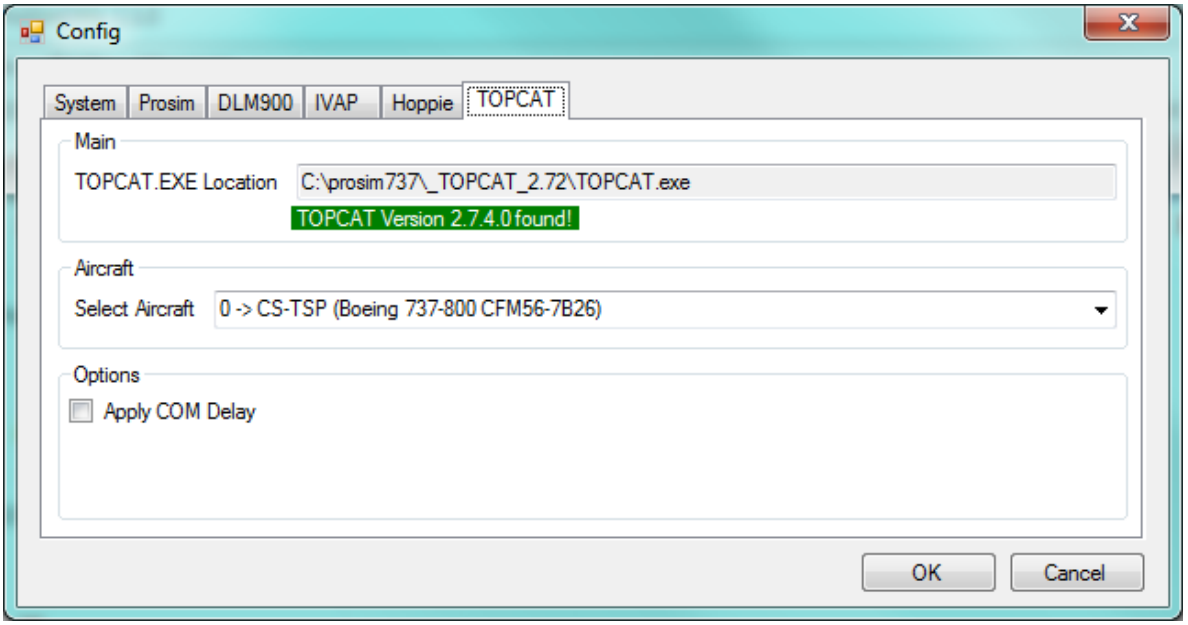

Fig 5.8.a

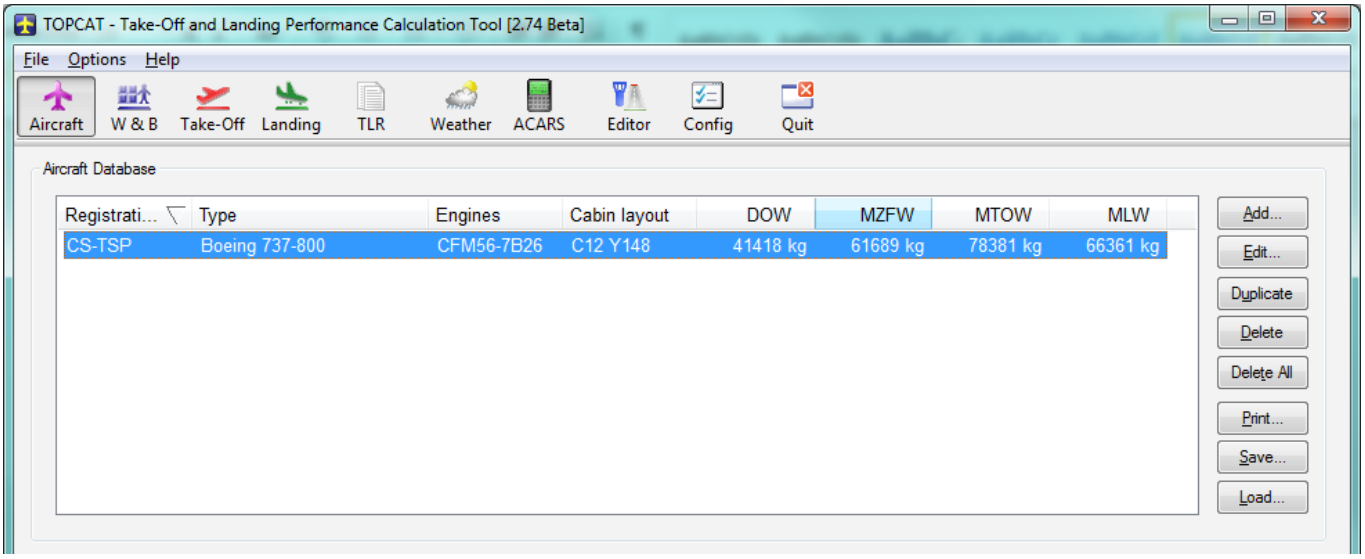

Fig 5.8.b

5.9 VATSIM Configuration (Fig 5.9.a)

Main->Status address: Location to download the status.txt file

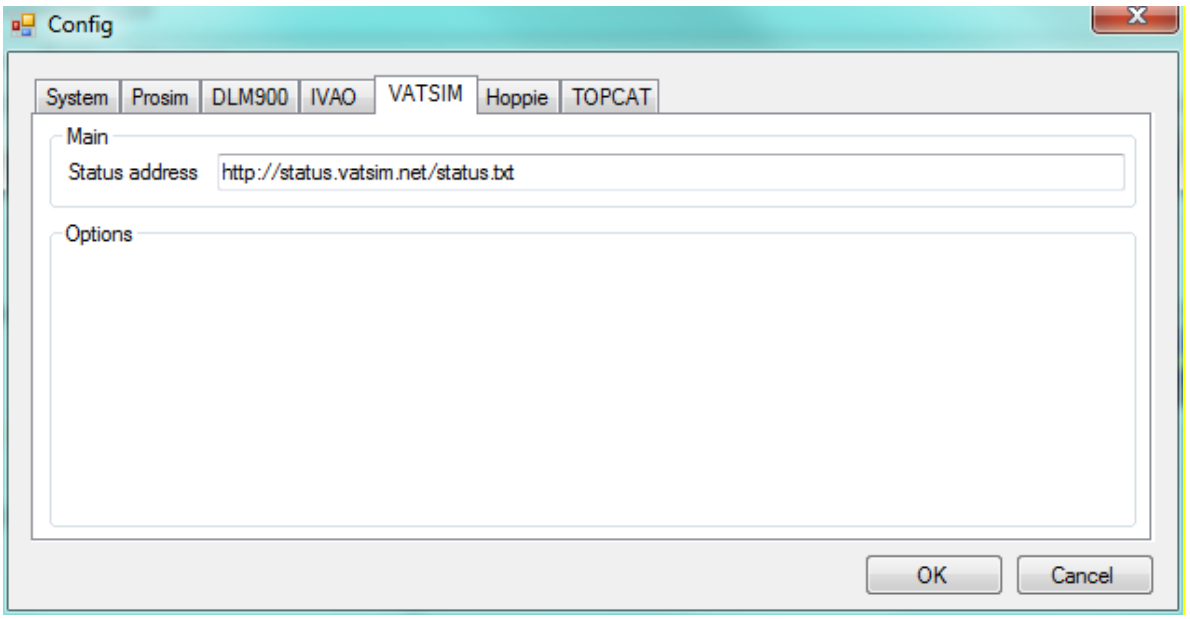

Fig 5.9.a

6. What it does?

ProSimUtils performs a set of functions not available with ProSim737, simulate ACARS and acts as a gateway between ProSim737 CDU and external networks like Hoppie ACARS and IVAO. Each gateway or function may have a specific ACARS definition file that allows the module to be controlled from the ProSim737 CDU.

6.1 Gateway

6.1.1 Hoppie ACARS network

ProSimUtils is used to send and receive messages between hoppie network and ProsimCDU interface. With this integration it is possible to retrieve TOPCAT performance data directly from the CDU. You can also retrieve METAR/TAF and exchange TELEX messages with other pilots flying with Hoppie ACARS. ADSC and POSREQ messages are also supported.

6.1.2 IVAO Network

With ProSimUtils we can send text messages directly to IVAP (IVAO network pilot interface) and also to receive text messages directly from IVAO network.

6.1.3 VATSIM Network

With ProSimUtils we can request weather from VATSIM network

6.2 Functions

6.2.1 Doors Synchronization

With ProSimUtils we can synchronize FS Doors and Prosim Doors. This way the opening of doors inside the Flight Simulator will have correct indication on the overhead panel.

6.2.2 Control FS doors

There is a custom page that gives the possibility to control Flight Simulator doors, the same way we do with CTRL+E + (2/3) but from the CDU interface.

6.3 ACARS Server

Starting with version 1.1.0, ProSimUtils can now act as an ACARS server with dispatch capabilities. The DLM900 module will handle AOC/ATS/TECHNICAL ACARS functions, while the TOPCAT module will give performance calculations directly in your CDU.

6.3.1 AOC Menu

In the AOC menu you will find the possibility to retrieve real world METAR/TAF data up to 3 stations at a time

6.3.2 ATS Menu

In the ATS menu you will find

6.3.3 TECHNICAL Menu

Check technical information of your system

7. How it works?

ProSimUtils consists of several modules. Some of them are mandatory (Main, FS, ProSim) and others are optional (Hoppie, IVAP).

7.1 Main Module

This module is the application itself. It controls the communication among all other modules and it is the user interface.

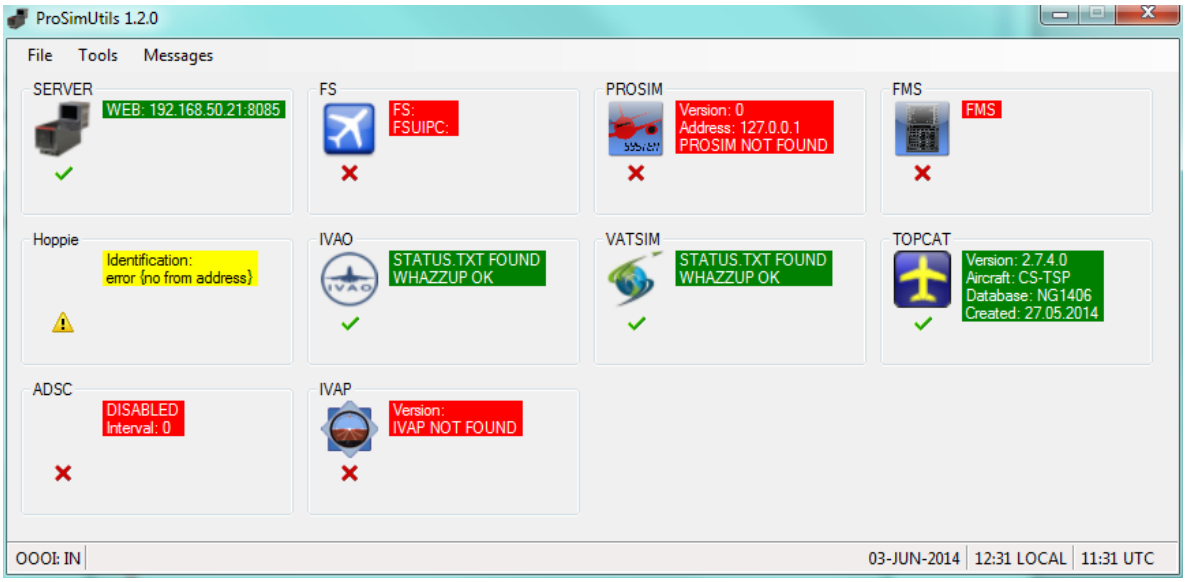

Fig 7.1.a

The main module is made of several other sub-modules:

1. Webserver: responsible for all communication between ProSimUtils and ProSim737. This module will receive HTTP requests and forward them to the correct module
2. DLM900: responsible for all AOC/ATS/TECHNICAL ACARS messages
3. MESSAGING: Will handle NEW, UPLINKS and DOWNLINKS message queues.

At the bottom of the main window, we can find current date, UTC and Local time.

To use any gateway module of ProSimUtils, you need to access the DLNK menu in the CDU. To access the DLNK menu, press the MENU key in the CDU and then select LSK2L (DLNK) (***Fig 7.1.b***).

If you have any disabled modules, they won't appear in the CDU.

After that, select the NEXT PAGE key to go to the second page where you will find the custom options (***Fig 7.1.c***).

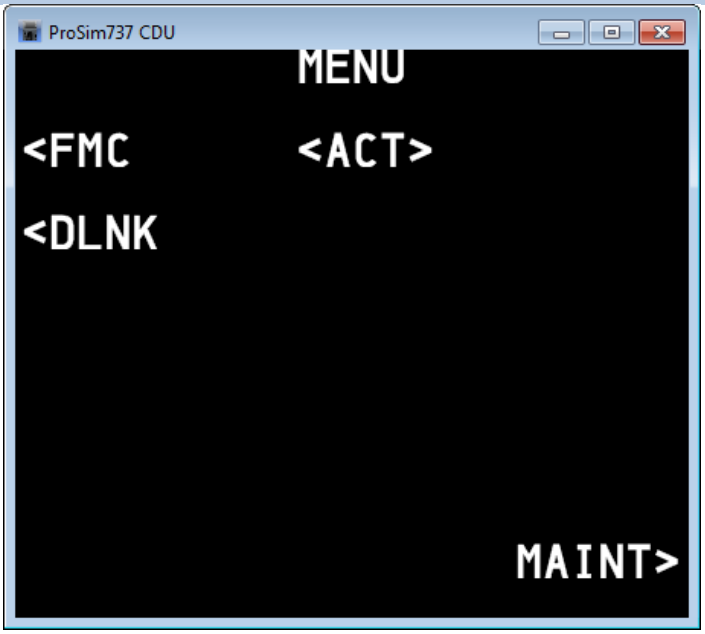

Fig 7.1.b

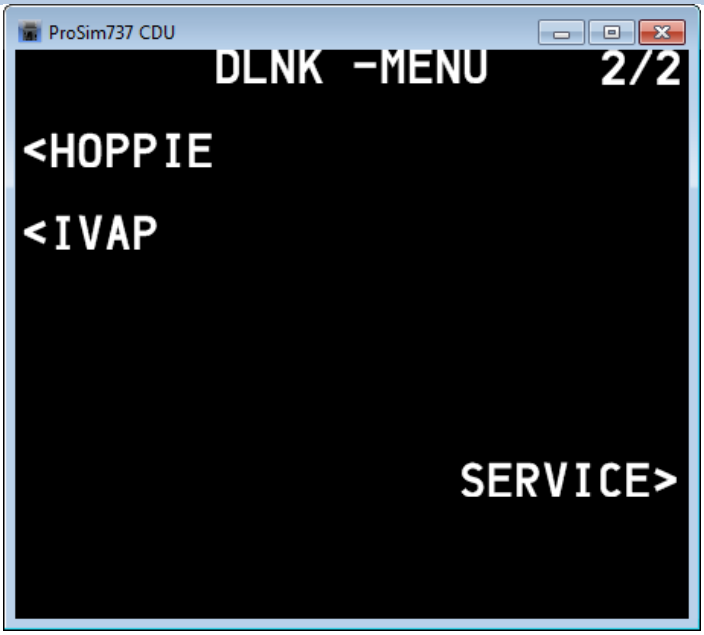

Fig 7.1.c

7.2 ProSim Module

The ProSim Module handles all ProSim status change and systems monitoring to be used in other modules

ProSimUtils communicate with ProSim using http and websockets protocols.

7.3 FS Module

Fs module is responsible for all communications between several ProSimUtils modules and the Flight Simulator.

ProSimUtils uses FSUIPC as backbone interface with the Flight Simulator.

7.4 Hoppie Module (optional)

Hoppie Module will handle all messaging process between ProSimUtils and Hoppie Network.

To make use of the Hoppie Module you need a Logon code.
You can request one at: http://www.hoppie.nl/acars/system/register.html

After receiving the code, insert it in the logon code field in Hoppie Configuration TAB *(see item 5.6).*

To access the Hoppie options select the HOPPIE option in the CDU (LSK1L) (***Fig 7.1.c***).

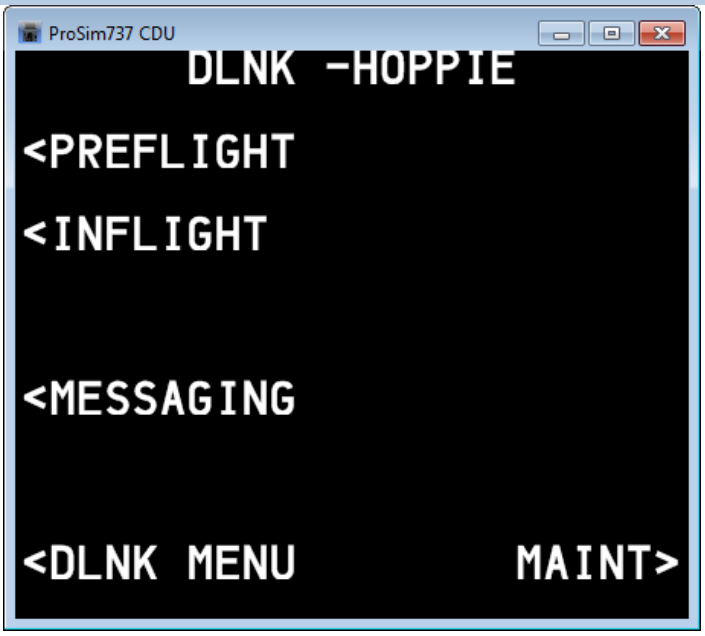

Fig 7.1.d

Fig 7.1.d DLNK –HOPPIE page

LSK1L (PREFLIGHT) ***Fig 7.1.e***
- Opens the PREFLIGH page

LSK2L (INFLIGHT) ***Fig 7.1.f***
- Opens the INFLIGHT page

LSK4L (MESSAGING) ***Fig 7.1.g***
- Opens the MESSAGING PAGE
- Only available if RTE page is set

LSK6L (DLNK MENU)
- Return to DLNK MENU

LSK6R (MAINT)
- Opens the MAINT page

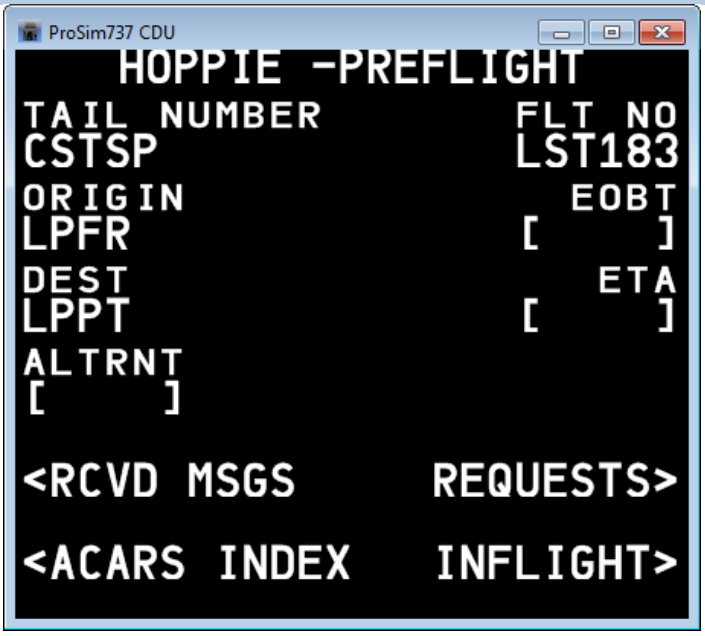

Fig 7.1.e

Fig 7.1.e HOPPIE –PREFLIGHT page

LSK1L (TAIL NUMBER)

- TAIL NUMBER configured in ProSim737 Configuration
- Read Only

LSK2L (ORIGIN)

- ORIGIN set in RTE page
- Read Only

LSK3L (DEST)

- DEST set in RTE page
- Read Only

LSK4L (ALTRNT)

- Input Alternate airport
- Not used

LSK5L (RCVD MSGS)

- Opens the received messages page

LSK6L (ACARS INDEX)

- Returns to HOPPIE MENU

LSK1R (FLT NO)

- Flight number set in RTE page
- Read only

LSK2R (EOBT)

- Input Estimated Off Block Time
- Not used

LSK3R (ETA)

- Input Estimated Time of Arrival
- Not used

LST5R (REQUEST)

- Opens the REQUESTS page
- Only available if RTE page is set

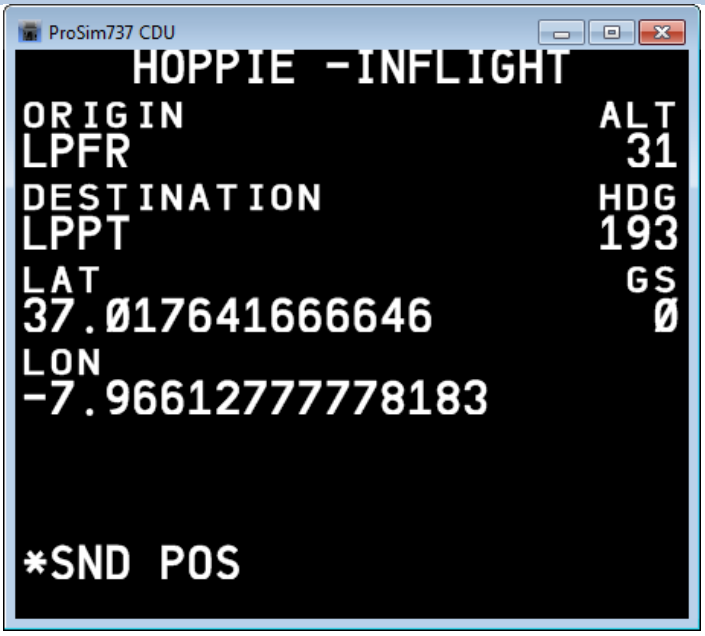

Fig 7.1.f

Fig 7.1.f HOPPIE –PREFLIGHT page

LSK1L (ORIGIN)
- Origin airport set in RTE page
- Read only

LSK2L (DESTINATION)
- Destination set in RTE page
- Read only

LSK3L (LAT)
- Current Aircraft latitude
- Read only

LSK4L (LON)
- Current aircraft longitude
- Read only

LSK6L (SEND)
- Sends a position report to Hoppie Server with data displayed

LSK1R (ALT)
- Current aircraft altitude
- Read only

LSK2R (HDG)
- Current aircraft heading
- Read only

LSK3R (GS)
- Current aircraft Ground Speed
- Read only

LSK6R (POSITION)
- Only displayed if an error occurred when sending the position report

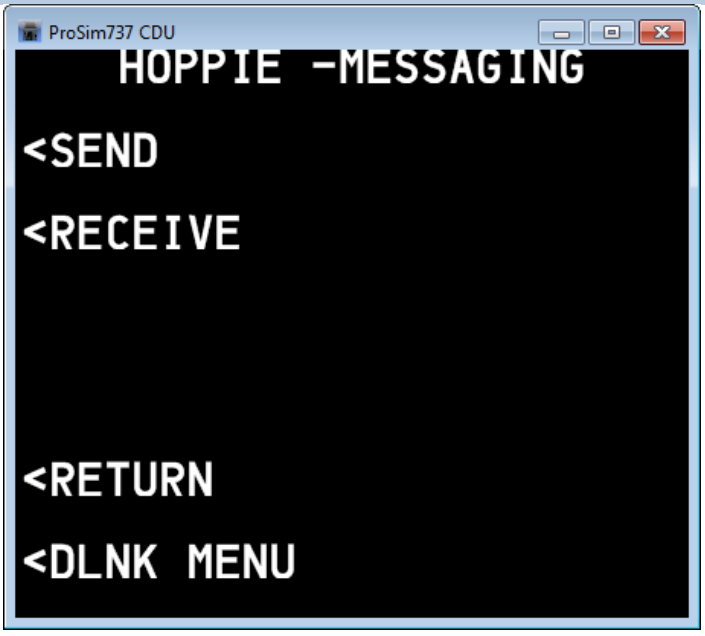

Fig 7.1.g

Fig 7.1.g HOPPIE –MESSAGING page

LSK1L (SEND)
- Opens the SEND MESSAGE page (***Fig 7.1.h***)

LSK2L (RECEIVE)
- Opens the RECEIVE MESSAGE page (***Fig 7.1.i***)

LSK5L (RETURN)
- Returns to HOPPIE MENU page

LSK6L (DLNK MENU)
- Return to DLNK MENU page

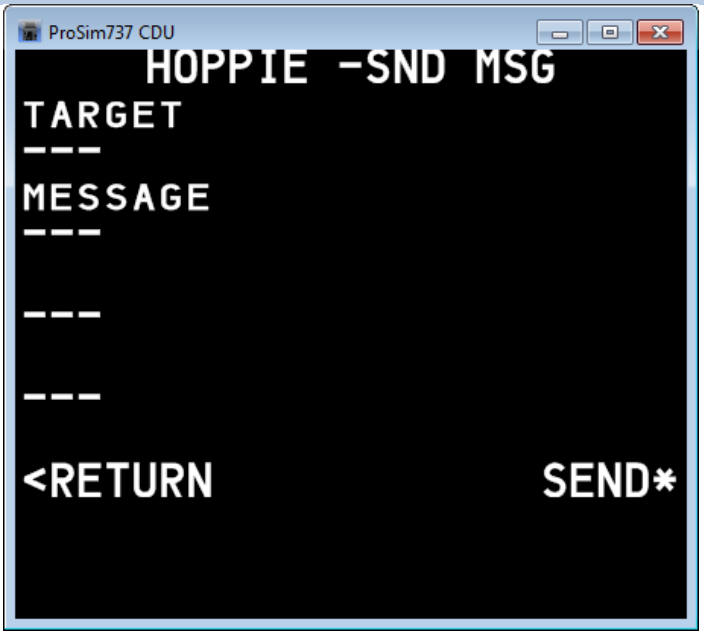

Fig7.1.h

Fig 7.1.h HOPPIE –SND MSG page

LSK1L (TARGET)

- Input the target call sign to send the message

LSK2L/LSK3L/LSK4L (MESSAGE)

- Write the message to send

LSK5L (RETURN)

- Returns to HOPPIE MESSAGING page

LSK5R (SEND)

- Sends the message to the Hoppie server

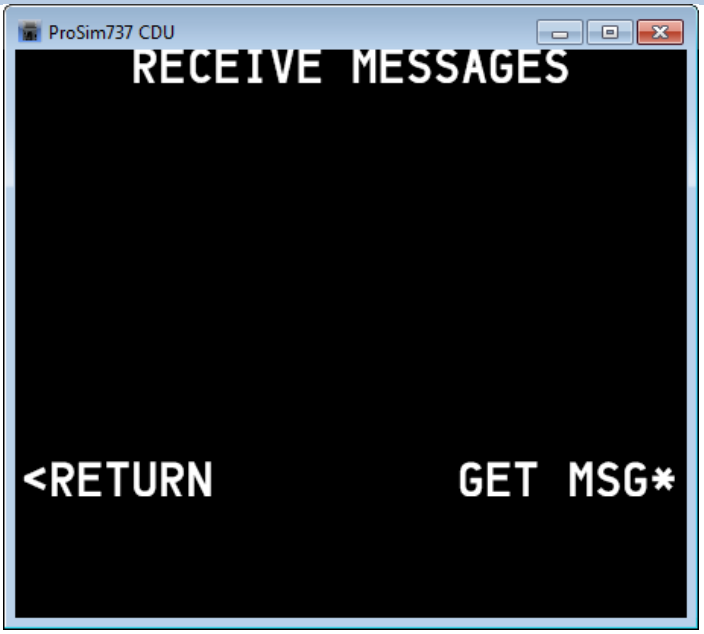

Fig 7.1.i

Fig 7.1.i HOPPIE –RECEIVE MESSAGES page

LSK5L (RETURN)

- Returns to HOPPIE -MESSAGING page

LSK5R (GET MSG)

- Retrieve ALL messages fromProSimUtils application and displays them all at once in a uplink page.

LSK6R (RCVD MESSAGES)

- Shows received messages
- Only available after requesting messages

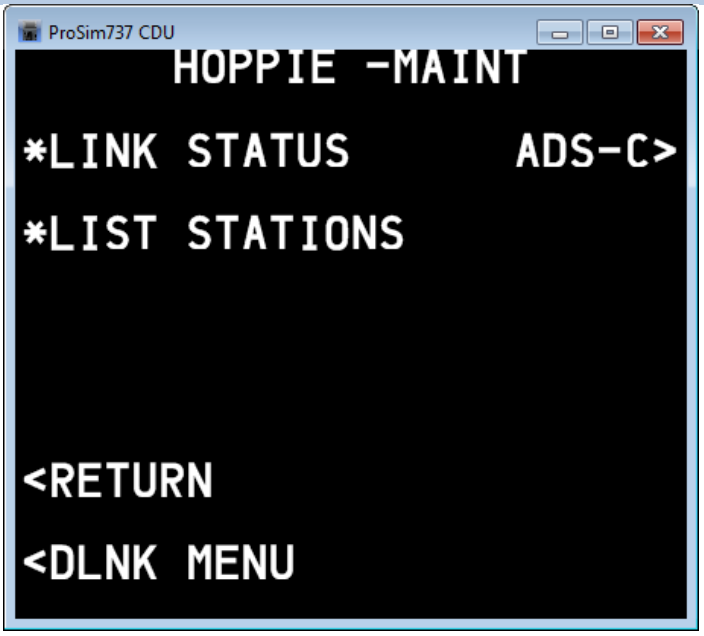

Fig 7.1.j

Fig 7.1.j HOPPIE –MAINT page

LSK1L (LINK STATUS)

- Verifies Hoppie server connectivity

LSK2L (LIST STATION)

- List all stations connected to the Hoppie server

LSK5L (RETURN)

- Returns to HOPPIE MENU page

LSK6L (DLNK MENU)

- Return to DLNK MENU page

LSK1R (ADS-C)

- Opens the ADSC page

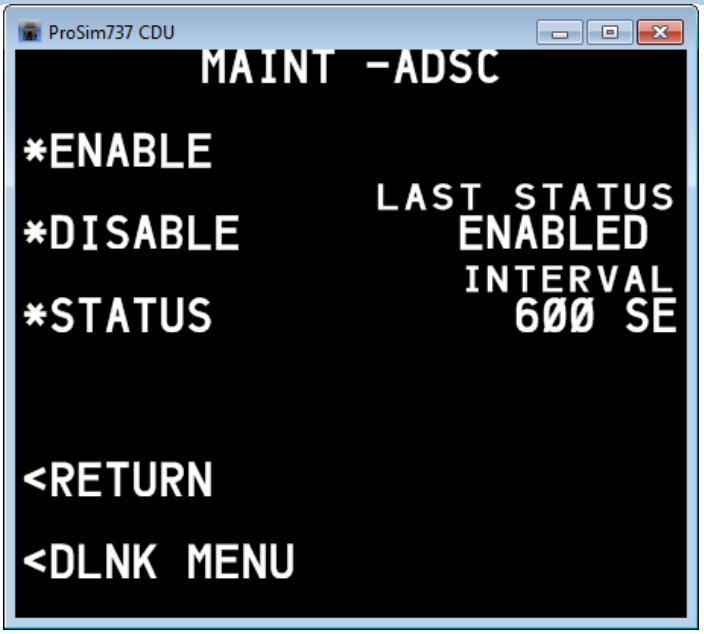

Fig 7.1.h

Fig 7.1.h HOPPIE –ADSC page

LSK1L (ENABLE)

- Enables ADS-C reporting
- ADS-C option must be enabled in Hoppie configuration TAB

LSK2L (DISABLE)

- Enables ADS-C reporting
- ADS-C option must be enabled in Hoppie configuration TAB

LSK3L (STATUS)

- Checks current ADS-C status

LSK5L (RETURN)

- Returns to HOPPIE MENU page

LSK6L (DLNK MENU)

- Return to DLNK MENU page

LSK2R/LSK3R (LAST STATUS/INTERVAL)

- Last status of ADS-C mode with interval in seconds
- Only available after send any ADSC command

7.5 IVAP Module (optional)

To access the IVAP options select the IVAP option in the CDU (LSK2L) (***Fig 7.1.c***).

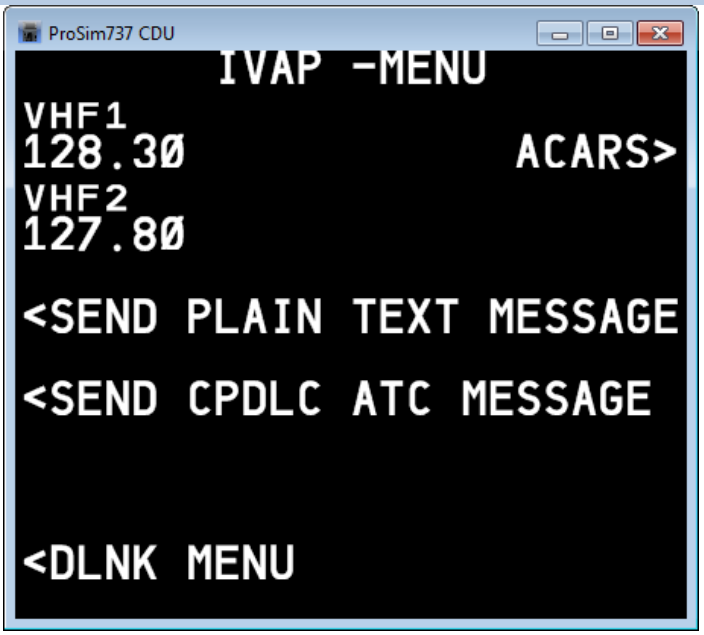

Fig 7.5.a

Fig 7.5.a IVAP –MENU page

LSK1L (VHF1)

- COMM1 active frequency
- Read only

LSK2L (VHF2)

- COMM2 active frequency
- Read only

LSK3L (SEND PLAIN TEXT MESSAGE)

- Opens the IVAP text messaging page

LSK4L (SEND CPDLC ATC MESSAGE)

- Opens the CPDLC composing page

LSK6L (DLNK MENU)

- Return to DLNK MENU

LSK1R (ACARS)

- Opens the IVAP ACARS page

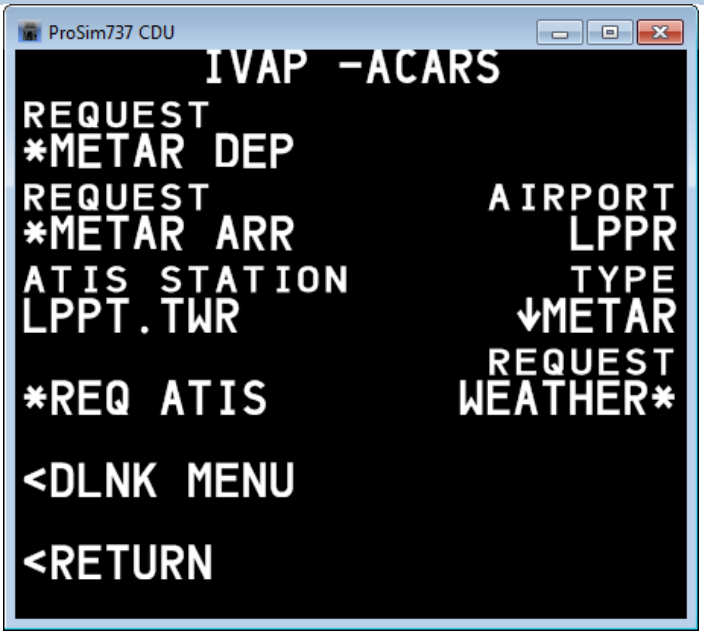

Fig 7.5b

Fig 7.5.b IVAP –ACARS page

LSK1L (REQUEST METAR DEP)

- Requests METAR for departure airport set in RTE page
- Only available if RTE page is set

LSK2L (REQUEST METAR ARR)

- Requests METAR for arrival airport set in RTE page
- Only available if RTE page is set

LSK3L (ATIS STATION)

- Input the station to request the ATIS
- As you cannot use the "_" in the CDU, use the "." Instead.

LSK4L (REQ ATIS)

- Sends the command to retrieve the ATIS for the selected station.
- Only available if ATIS STATION is not empty

LSK5L (DLNK MENU)

- Return to DLNK MENU

LSK6L (RETURN)

- Returns to IVAP –MENU page

LSK2R (AIRPORT)

- Input the ICAO code of an airport to retrieve IVAO weather information

LSK3R (TYPE)

- Select the weather information type
- Options: METAR, TAF, SHORTTAF
- Only available if AIRPORT field is not empty

LSK4R (REQUEST WEATHER)

- Sends the selected request to IVAO
- Only available if AIRPORT field is not empty

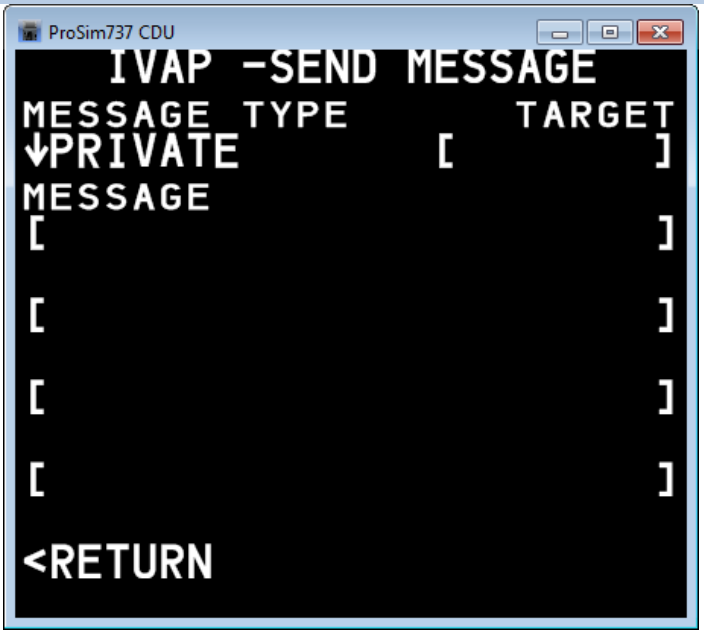

Fig 7.5c

Fig 7.5.c IVAP –SEND MESSAGE page

LSK1L (MESSAGE TYPE)

- Selects the type of message
- Options: PRIVATE, NORMAL

LSK2L/LSK3L/LSK4L/LSK5L (MESSAGE)

- Input the message you want to send

LSK6L (RETURN)

- Returns to IVAP –MENU page

LSK1R (TRAGET)

- Input the call sign you want to send the message
- Replace the "_" with a "."
- Only available if MESSAGE TYPE is PRIVATE

LSK6R (SEND)

- Sends the message to IVAP
- Only available if any text is in the message field or if message type is private, a target is also required

7.6 CPDLC Module

With this module you are able to construct CPDLC messages in the CDU. In version 1.0.0, the CPDLC module will only work with IVAP.

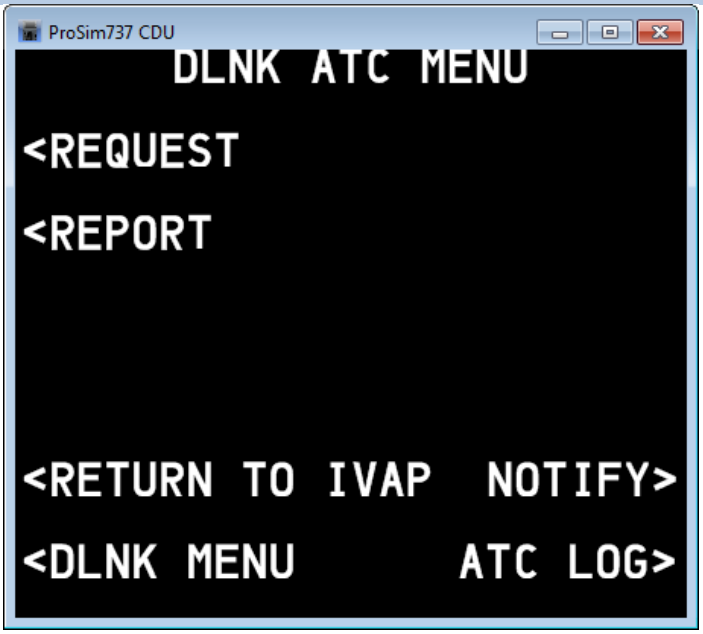

Fig 7.6.a

Fig 7.6.a DLNK ATC –MENU page

LSK1L (REQUEST)
- Opens the REQUEST page

LSK2L (REPORT)
- Opens the REPORT page

LSK5L (RETURN TO IVAP)
- Returns to IVAP –MENU page
- Only available if CPDLC interface is called from IVAP

LSK6L (DLNK MENU)
- Return to DLNK MENU

LSK5R (NOTIFY)
- INOP

LSK6R (ATC LOG)
- INOP

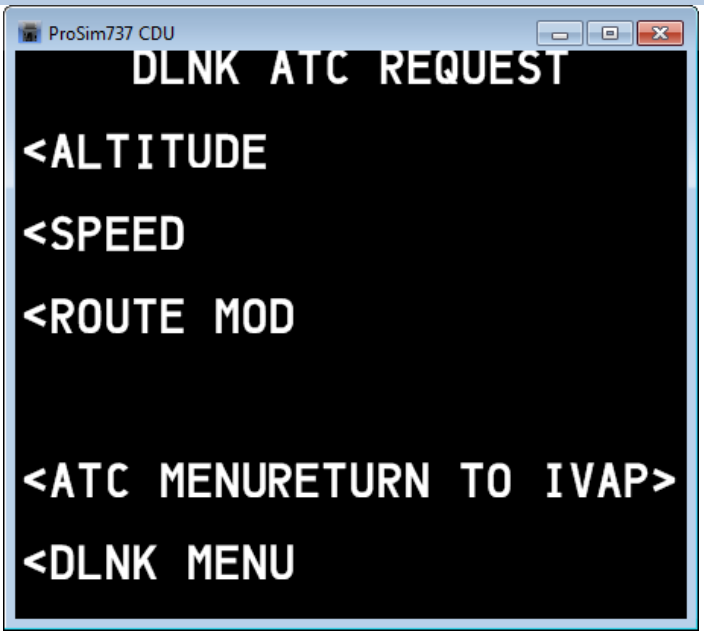

Fig 7.6b

Fig 7.6.b DLNK ATC REQUEST page

LSK1L (ALTITUDE)
- Requests METAR for departure airport set in RTE page

LSK2L (SPEED)
- Requests METAR for arrival airport set in RTE page
- Only available if RTE page is set

LSK3L (ROUTE MOD)
- Input the station to request the ATIS
- As you cannot use the "_" in the CDU, use the "." Instead.

LSK5L (ATC MENU)
- Returns to the DLNK ATC MENU

LSK6L (DLNK MENU)
- Return to DLNK MENU

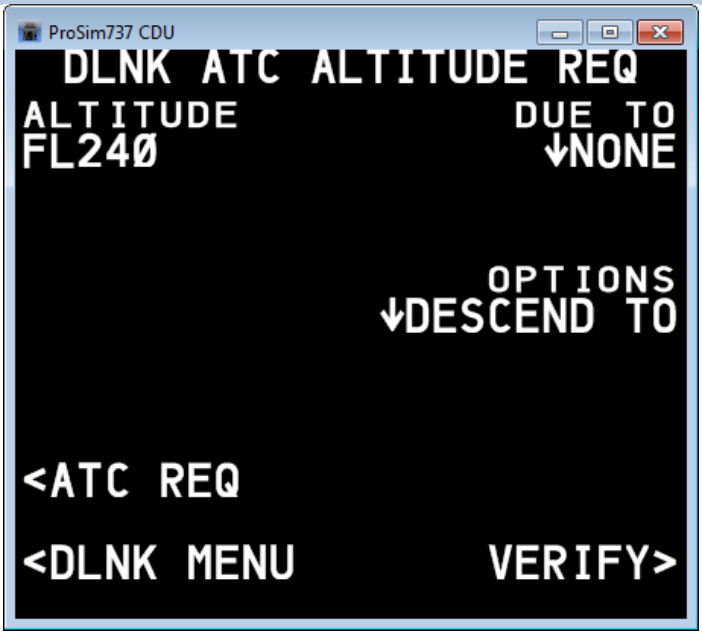

Fig 7.6.c

Fig 7.6.c DLNK ATC ALTITUDE REQ page

LSK1L (ALTITUDE)

- Input Altitude or FL requested

LSK5L (ATC REQ)

- Returns to the DLNK ATC REQUEST page

LSK6L (DLNK MENU)

- Return to DLNK MENU

LSK1R (DUE TO)

- Options: NONE, WX, A/C PERF
- INOP

LSK3R (OPTIONS)

- Options: NONE, CLIMB TO, DESCEND TO

LSK6R (VERIFY)

- Verify the message before sending
- Only available if request is properly filled

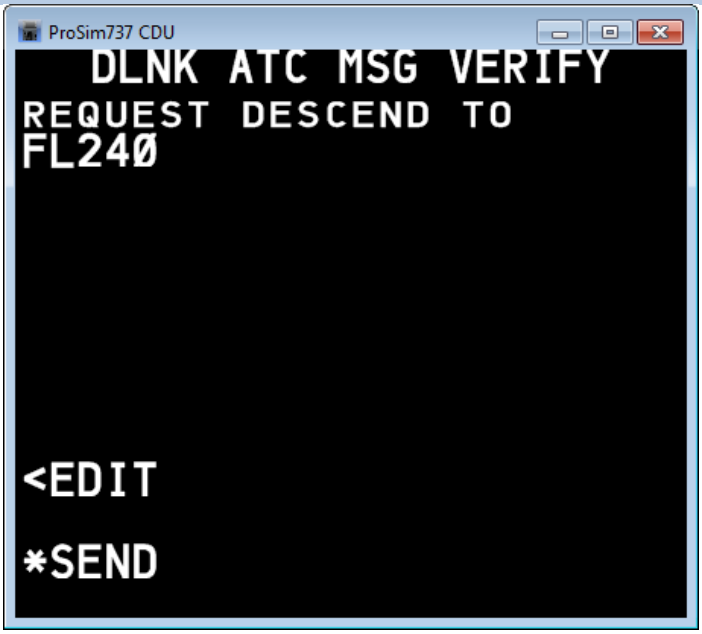

Fig 7.6d

Fig 7.6.d DLNK ATC MSG VERIFY page

LSK1L

- Displays the message to be sent

LSK5L (EDIT)

- Returns to the REQUEST page so the message can be edited

LSK6L (SEND)

- Sends the request and returns to the DLNK ATC REQUEST page

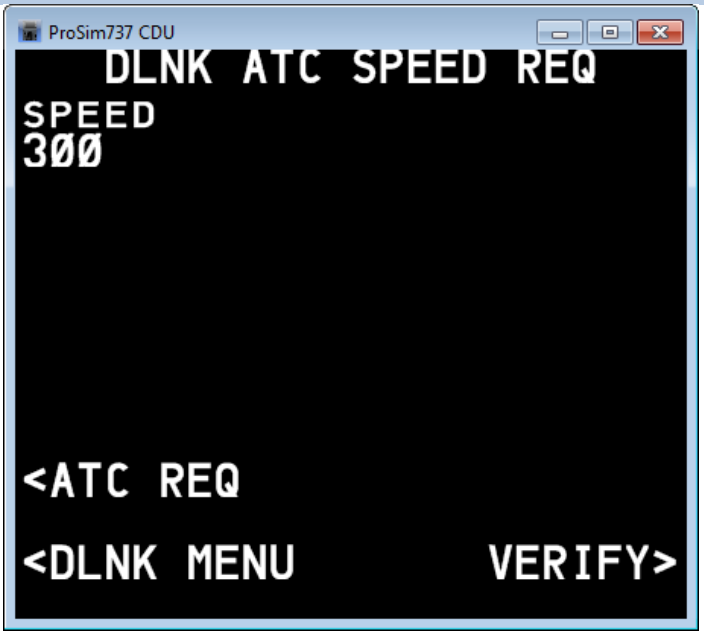

Fig 7.6.e

Fig 7.6.e DLNK ATC SPEED REQ page

LSK1L (ALTITUDE)

- Input requested speed

LSK5L (ATC REQ)

- Returns to the DLNK ATC REQUEST page

LSK6L (DLNK MENU)

- Return to DLNK MENU

LSK6R (VERIFY)

- Verify the message before sending
- Only available if request is properly filled

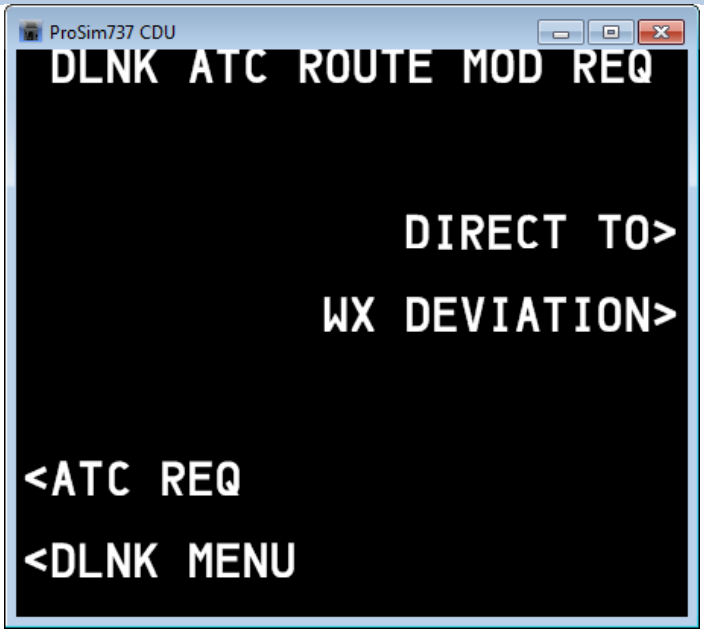

Fig 7.6.f

Fig 7.6.f DLNK ATC ROUTE MOD REQ page

LSK6L (DLNK MENU)

- Return to DLNK MENU

LSK6R (VERIFY)

- Verify the message before sending
- Only available if request is properly filled

LSK2L (DIRECT TO)

- Opens the DIRECT TO page

LSK2L (WX DEVIATION)

- Opens the WX DEVIATION page

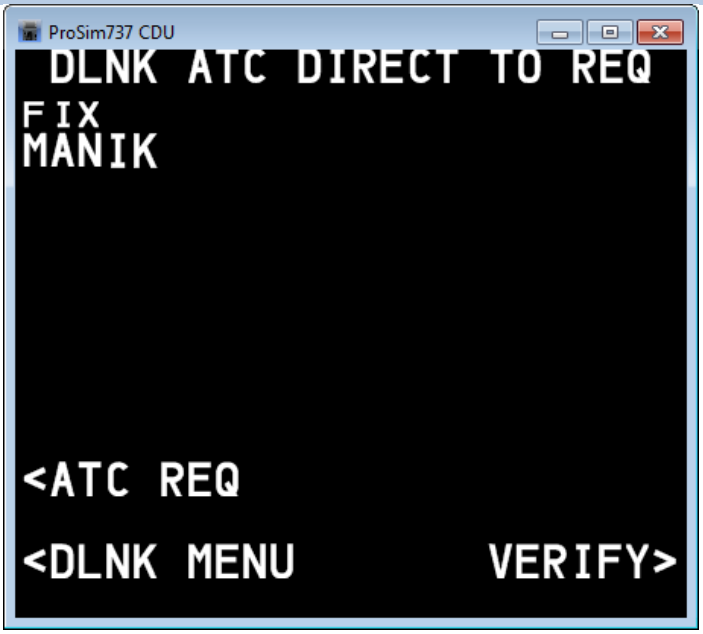

Fig 7.6.g

Fig 7.6.g DLNK ATC DIRECT TO REQ page

LSK1L (FIX)

- Input requested fix to proceed direct to

LSK5L (ATC REQ)

- Returns to the DLNK ATC REQUEST page

LSK6L (DLNK MENU)

- Return to DLNK MENU

LSK6R (VERIFY)

- Verify the message before sending
- Only available if request is properly filled

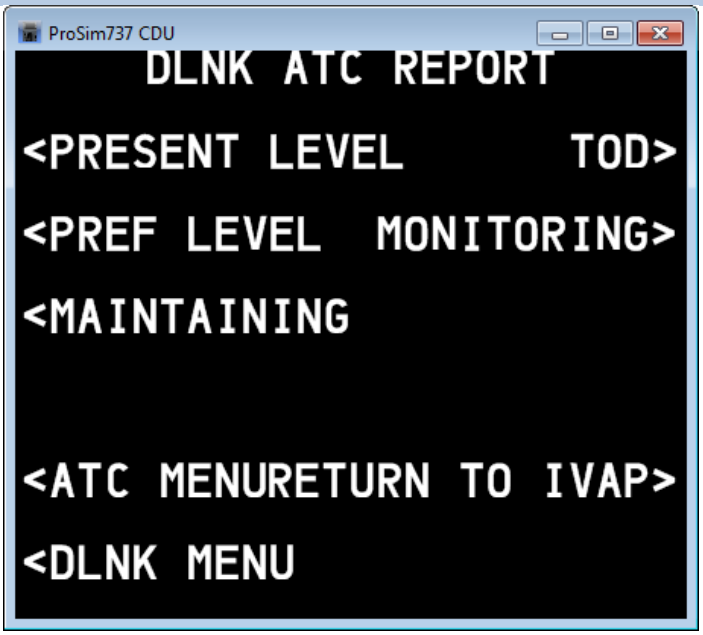

Fig 7.6.h

Fig 7.6.h DLNK ATC REPORT page

LSK1L/LSK2L/LSK3L

- INOP

LSK5L (ATC MENU)

- Returns to the DLNK ATC MENU

LSK6L (DLNK MENU)

- Return to DLNK MENU

LSK1R/LSK2R

- INOP

LSK5R (RETURN TO IVAP)

- Returns to IVAP interface.
- Only available if CPDLC interface was opened from IVAP

7.7 Service Module

In this module you will find a page to handle additional options that do not exist in the ProSim737 CDU Service menu. To access the custom service options select the SERVICE option in the CDU (LSK5R) (***Fig 7.1.c***).

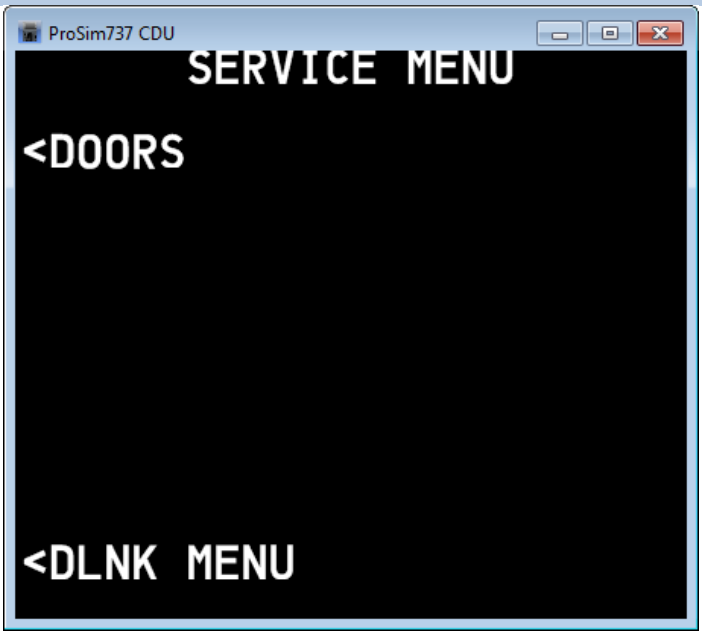

Fig 7.7.a

Fig 7.7.a SERVICE MENU page

LSK1L (DOORS)

- Opens the DOORS page

LSK6L (DLNK MENU)

- Return to DLNK MENU

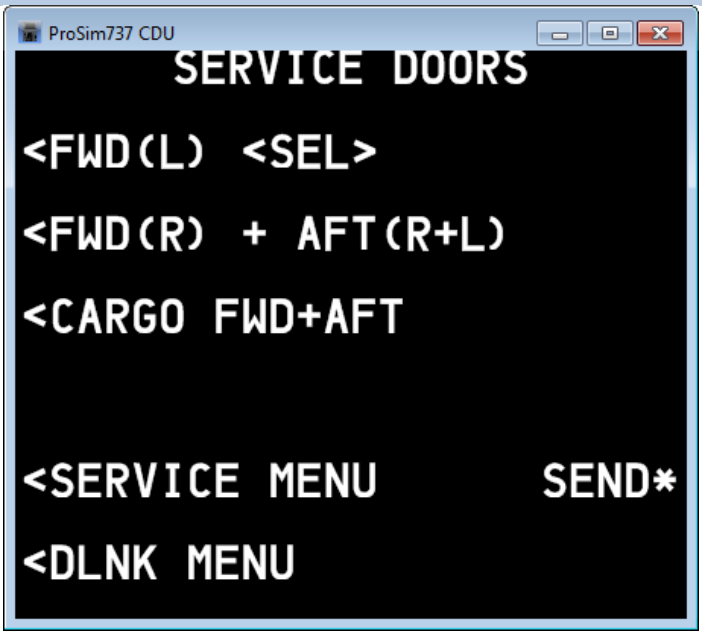

Fig 7.7.b

Fig 7.7.a SERVICE -DOORS page

LSK1L (FWD(L))

- Selects Forward left door

LSK2L (FWD(R) + AFT(R+L))

- Selects Forward right door
- Select Aftward right and left doors

LSK3L (CARGO FWD+AFT)

- Selects both cargo doors

LSK5L (SERVICE MENU)

- Returns to SERVICE MENU

LSK6L (DLNK MENU)

- Return to DLNK MENU

LSK5R (SEND)

- Send the command to FS to open/clos selected doors
- Available only if any option is selected

7.8 Messages

In this window (***Fig 7.8.a***) we can see messages that were sent/received by the application or the CDU.

New-> All new messages retrieved by ProSimUtils that were not polled by the CDU
UPLINKS-> All messages sent to proSim737 CDU
DOWNLINKS-> All messages sent by ProSimUtils. Messages shown in this table, are also sent automatically, like a position report or an ADSC message.

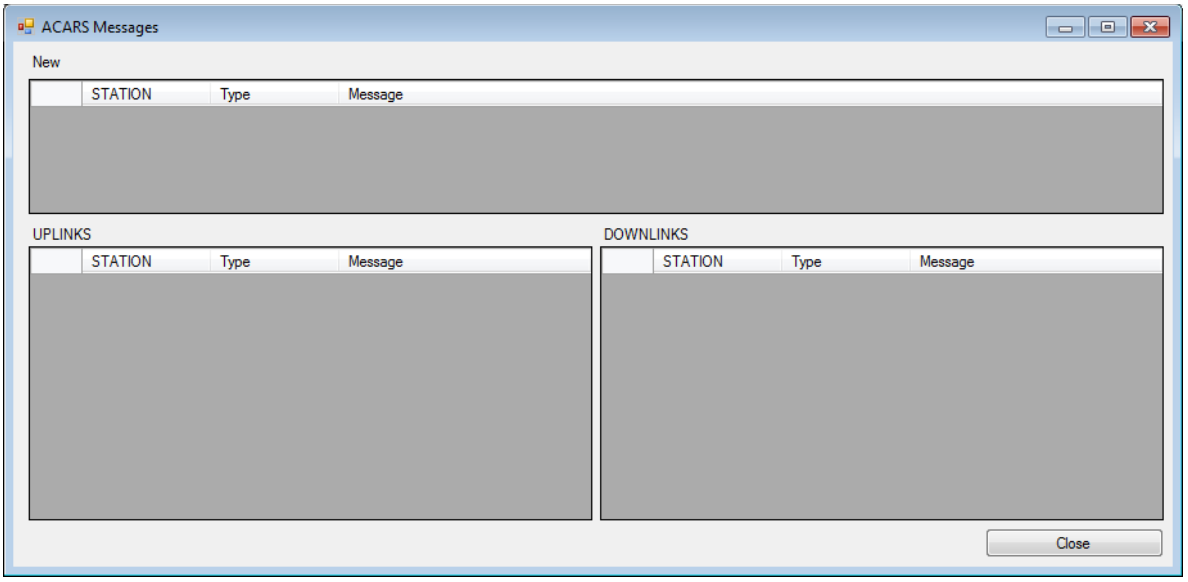

Fig 7.8.a

7.9 TOPCAT Module

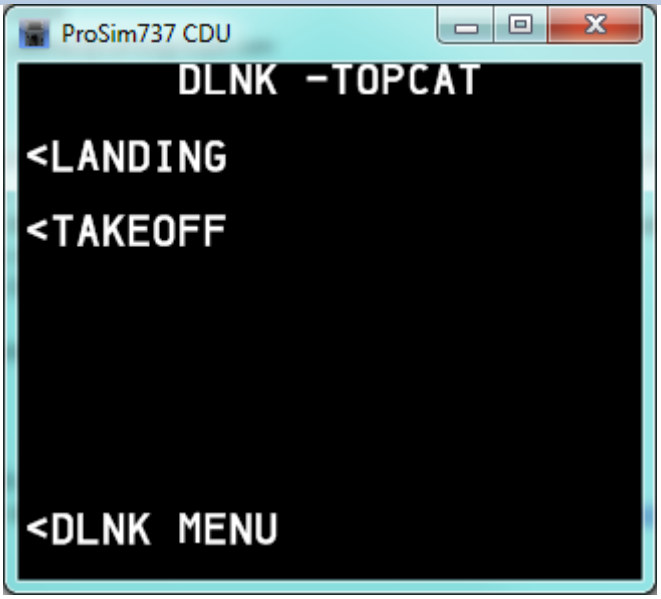

Fig 7.9.a

Fig 7.9.a DLNK -TOPCAT page

LSK1L (LANDING)

- Open TOPCAT Landing page

LSK2L (TAKEOFF)

- Open TOPCAT Takeoff page

LSK6L (DLNK MENU)

- Return to DLNK MENU

Fig 7.9.b

Fig 7.9.b TOPCAT -LANDING page(1/3)

LSK2L AIRPORT

- Select airport for calculations. Default: Destination from RTE page

LSK3L SEL RWY

- Open a page to select the runway. Only available if AIRPORT is filled.

LSK2R SHORTENING

- Enter any temporary runway shortening

LSK5L (DLNK MENU)

- Return to DLNK MENU

LSK6L (RETURN)

- Return to TOPCAT page

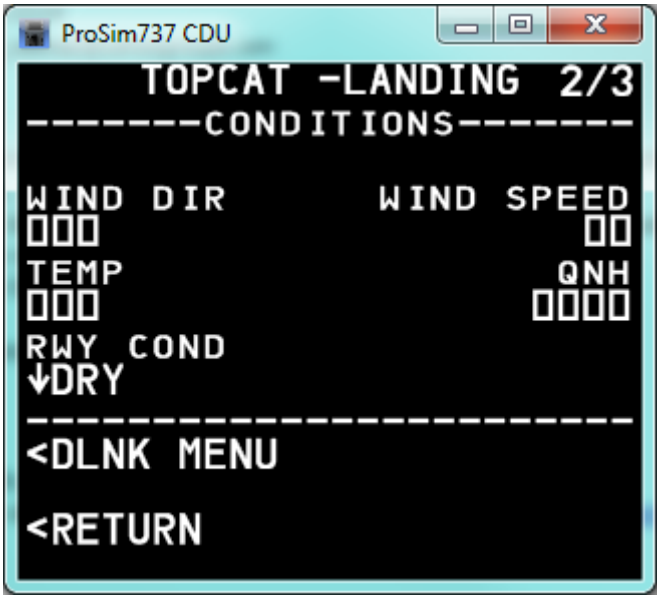

Fig 7.9.c

Fig 7.9.c TOPCAT -LANDING page (2/3)

LSK2L AIRPORT

- Select airport for calculations. Default: Departure from RTE page

LSK3L SEL RWY

- Open a page to select the runway. Only available if AIRPORT is filled.

LSK5L (DLNK MENU)

- Return to DLNK MENU

LSK6L (RETURN)

- Return to TOPCAT page

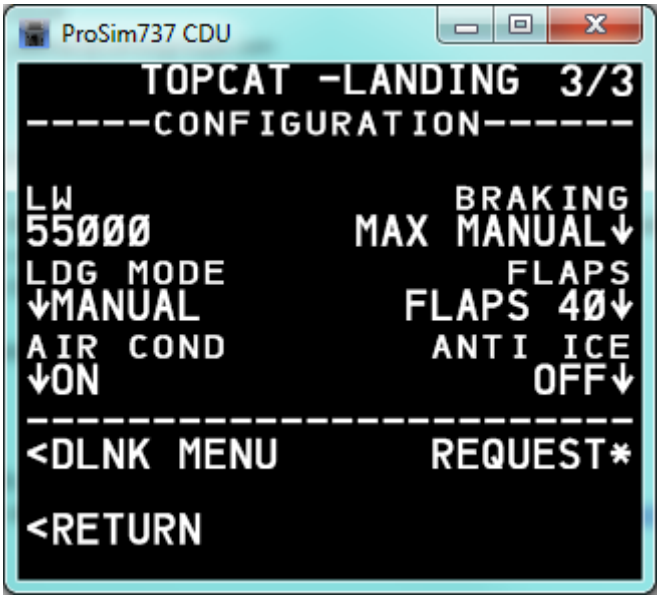

Fig 7.9.d

Fig 7.9.d TOPCAT -LANDING page (3/3)

LSK2L LW

- Enter Expected LW for calculations

LSK3L LDG MODE

- Select landing mode (AUTO/MANUAL)

LSK4L AIR COND

- Select Air-conditioning mode

LSK2R BRAKING

- Select braking mode (FULL MANUAL/AUTOMAX/AUTO 1/AUTO 2/AUTO3)

LSK3R FLAPS

- Select FLAPS for landing

LSK4R ANTI ICE

- Select Anti-Ice

LSK5R REQUEST

- Send the request to TOPCAT. Only available if LW filled

LSK5L (DLNK MENU)

- Return to DLNK MENU

LSK6L (RETURN)

- Return to TOPCAT page

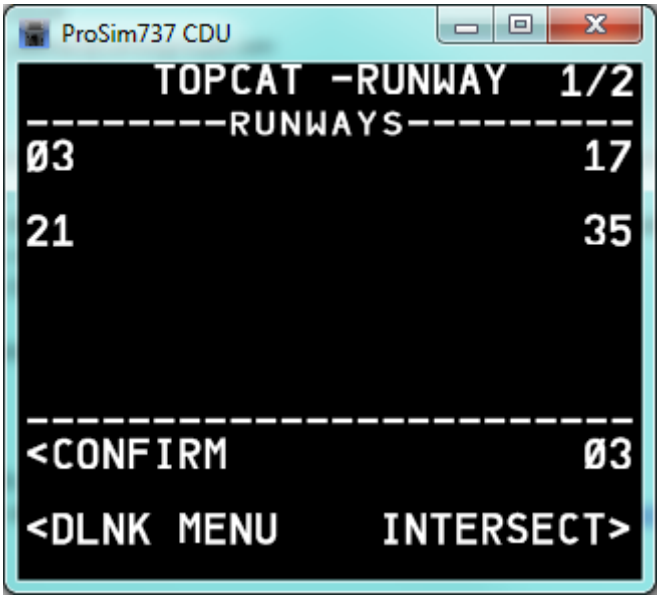

Fig 7.9.e

Fig 7.9.e TOPCAT -RUNWAY page

LSK1L/2L/3L74L/1R/2R/3R/4R AIRPORT

- Choose one runway to pass to LSK5R

LSK5R INPUT

- Enter the runway selected from the above LSKs

LSK6R INTERSECT

- Option to select intermediate position for takeoff (only available for TAKE OFF performance)

LSK5L (DLNK MENU)

- Return to DLNK MENU

LSK6L (RETURN)

- Return to TOPCAT LANDING/TAKEOFF page / changes to CONFIRM when input is filled

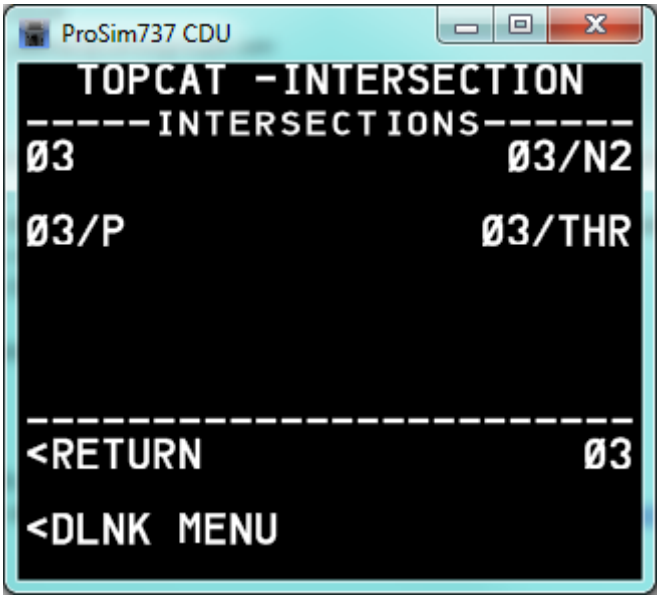

Fig 9.9.f

Fig 7.9.f TOPCAT -INTERSECTION page

LSK1L/2L/3L74L/1R/2R/3R/4R AIRPORT

- Choose one intersection to pass to LSK5R

LSK5R INPUT

- Enter the runway selected from the above LSKs

LSK5L (DLNK MENU)

- Return to DLNK MENU

LSK6L (RETURN)

- Return to TOPCAT TAKEOFF page / changes to CONFIRM when input is filled

7.10 Logging and Debugging Module

There two tools that will help solving problems, the Log file and the Debug file.

7.10.1 Log File

For each time you start the application, it will start logging application events. There are 6 types of log events: DEBUG, VERB, INFO, WARN, ERROR and FATAL. The configuration gives you the option to limit the lower log event (Log Level – See item 7.2) to avoid large log files.

There are three ways to see the log file. One of them is after closing the application. For every time the application is run, a log file is created after closing it. The file is located inside the log directory at ProSimUtils application path (Fig

7.10.1.a).

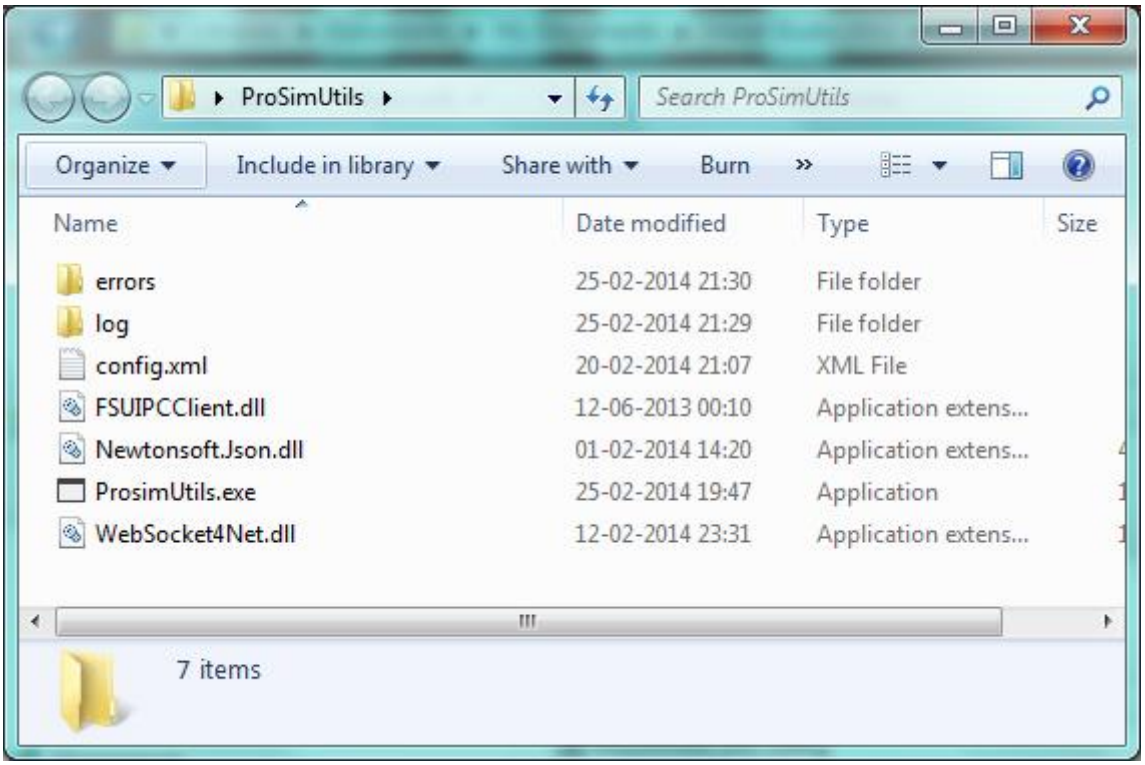

Fig 7.10.1.a

Inside the log directory you will find one log file for each time the application was executed. The name of the log file represents the date and time the application was closed and the log file created (Fig 7.10.1.b).

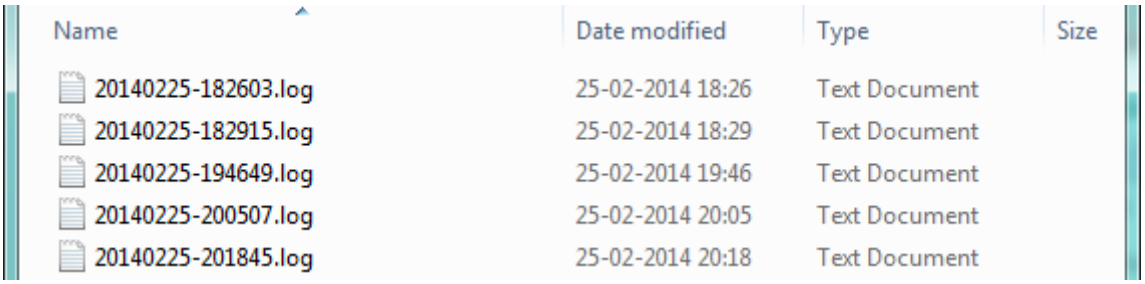

Fig 7.10.1.b

If you open the log file you can see all application events logged (Fig 7.10.1.c).

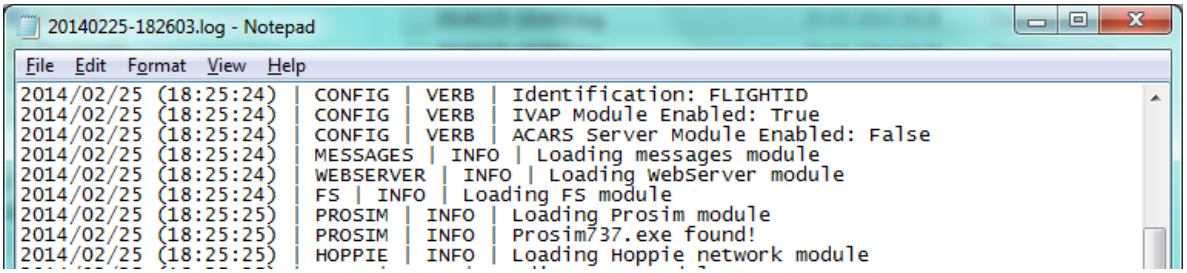
20140225-182603.log - Notepad
File Edit Format View Help
2014/02/25 (18:25:24) | CONFIG | VERB | Identification: FLIGHTID
2014/02/25 (18:25:24) | CONFIG | VERB | IVAP Module Enabled: True
2014/02/25 (18:25:24) | CONFIG | VERB | ACARS Server Module Enabled: False
2014/02/25 (18:25:24) | MESSAGES | INFO | Loading messages module
2014/02/25 (18:25:24) | WEBSERVER | INFO | Loading WebServer module
2014/02/25 (18:25:24) | FS | INFO | Loading FS module
2014/02/25 (18:25:25) | PROSIM | INFO | Loading Prosim module
2014/02/25 (18:25:25) | PROSIM | INFO | Prosim737.exe found!
2014/02/25 (18:25:25) | HOPPIE | INFO | Loading Hoppie network module

Fig 7.10.1.c

Each line is an event that was logged with the following format: ***Date stamp | Module | Type of event | Message***

While the application is running, we have two ways to see the log file.

The first way is the LOG button in the main screen (Fig 7.1.a). After clicking the button a new window will appear (Fig 7.10.1.d).

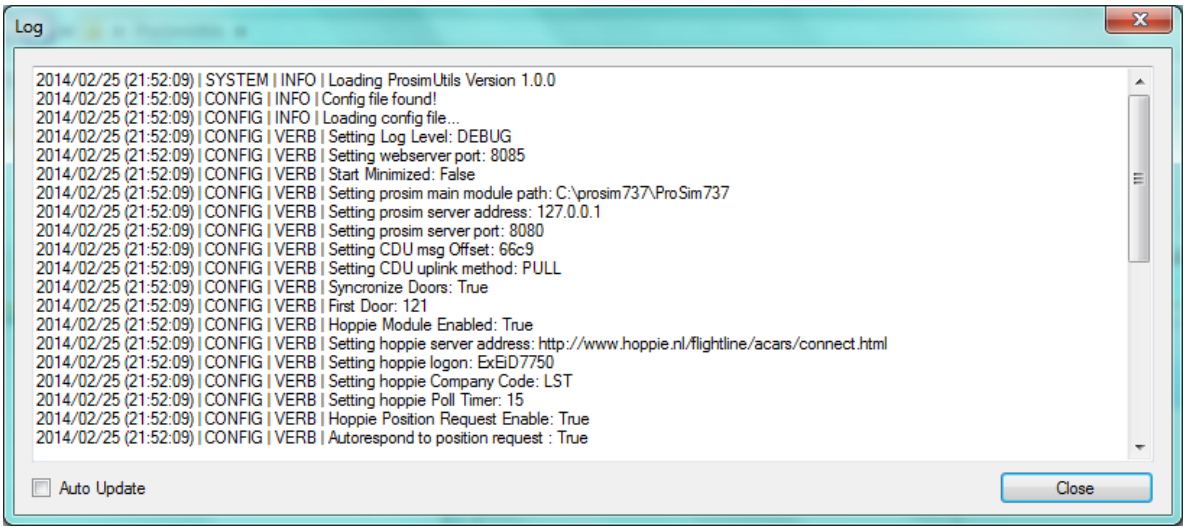
Log
2014/02/25 (21:52:09) | SYSTEM | INFO | Loading ProsimUtils Version 1.0.0
2014/02/25 (21:52:09) | CONFIG | INFO | Config file found!
2014/02/25 (21:52:09) | CONFIG | INFO | Loading config file...
2014/02/25 (21:52:09) | CONFIG | VERB | Setting Log Level: DEBUG
2014/02/25 (21:52:09) | CONFIG | VERB | Setting webserver port: 8085
2014/02/25 (21:52:09) | CONFIG | VERB | Start Minimized: False
2014/02/25 (21:52:09) | CONFIG | VERB | Setting prosim main module path: C:\prosim737\ProSim737
2014/02/25 (21:52:09) | CONFIG | VERB | Setting prosim server address: 127.0.0.1
2014/02/25 (21:52:09) | CONFIG | VERB | Setting prosim server port: 8080
2014/02/25 (21:52:09) | CONFIG | VERB | Setting CDU msg Offset: 66c9
2014/02/25 (21:52:09) | CONFIG | VERB | Setting CDU uplink method: PULL
2014/02/25 (21:52:09) | CONFIG | VERB | Syncronize Doors: True
2014/02/25 (21:52:09) | CONFIG | VERB | First Door: 121
2014/02/25 (21:52:09) | CONFIG | VERB | Hoppie Module Enabled: True
2014/02/25 (21:52:09) | CONFIG | VERB | Setting hoppie server address: http://www.hoppie.nl/flightline/acars/connect.html
2014/02/25 (21:52:09) | CONFIG | VERB | Setting hoppie logon: ExEiD7750
2014/02/25 (21:52:09) | CONFIG | VERB | Setting hoppie Company Code: LST
2014/02/25 (21:52:09) | CONFIG | VERB | Setting hoppie Poll Timer: 15
2014/02/25 (21:52:09) | CONFIG | VERB | Hoppie Position Request Enable: True
2014/02/25 (21:52:09) | CONFIG | VERB | Autorespond to position request : True
Auto Update
Close

Fig 7.10.1.d

Every time we open the log windows, we have a snapshot of the Log. Check the Auto Update option to update the log automatically every time a new event is logged.

The second option to see the log during runtime is using the embedded web server. Open your browser and type the address: http://xxx.xxx.xxx.xxx:yyyy/log where xxx.xxx.xxx.xxx is the IP of the ProSimUtils computer and yyyy is the port number configured in Fig 5.3.a (Fig 7.10.1.d)

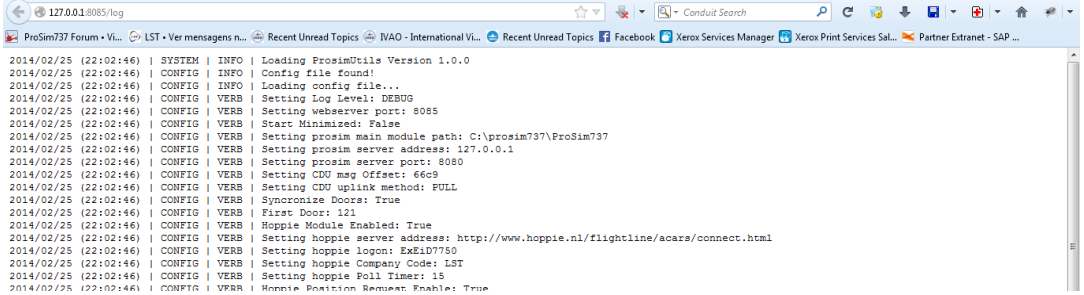
127.0.0.1:8085/log
2014/02/25 (22:02:46) | SYSTEM | INFO | Loading ProsimUtils Version 1.0.0
2014/02/25 (22:02:46) | CONFIG | INFO | Config file found!
2014/02/25 (22:02:46) | CONFIG | INFO | Loading config file...
2014/02/25 (22:02:46) | CONFIG | VERB | Setting Log Level: DEBUG
2014/02/25 (22:02:46) | CONFIG | VERB | Setting webserver port: 8085
2014/02/25 (22:02:46) | CONFIG | VERB | Start Minimized: False
2014/02/25 (22:02:46) | CONFIG | VERB | Setting prosim main module path: C:\prosim737\ProSim737
2014/02/25 (22:02:46) | CONFIG | VERB | Setting prosim server address: 127.0.0.1
2014/02/25 (22:02:46) | CONFIG | VERB | Setting prosim server port: 8080
2014/02/25 (22:02:46) | CONFIG | VERB | Setting CDU msg Offset: 66c9
2014/02/25 (22:02:46) | CONFIG | VERB | Setting CDU uplink method: PULL
2014/02/25 (22:02:46) | CONFIG | VERB | Syncronize Doors: True
2014/02/25 (22:02:46) | CONFIG | VERB | First Door: 121
2014/02/25 (22:02:46) | CONFIG | VERB | Hoppie Module Enabled: True
2014/02/25 (22:02:46) | CONFIG | VERB | Setting hoppie server address: http://www.hoppie.nl/flightline/acars/connect.html
2014/02/25 (22:02:46) | CONFIG | VERB | Setting hoppie logon: ExEiD7750
2014/02/25 (22:02:46) | CONFIG | VERB | Setting hoppie Company Code: LST
2014/02/25 (22:02:46) | CONFIG | VERB | Setting hoppie Poll Timer: 15

Fig 7.10.1.d

7.10.2 Debug File

Additional information is logged into a debug file inside the ***error*** folder (***Fig 7.10.2.a***). There is one debug file per day and the naming is YYYYMMDD.debug.txt (***Fig 7.10.2.b***).

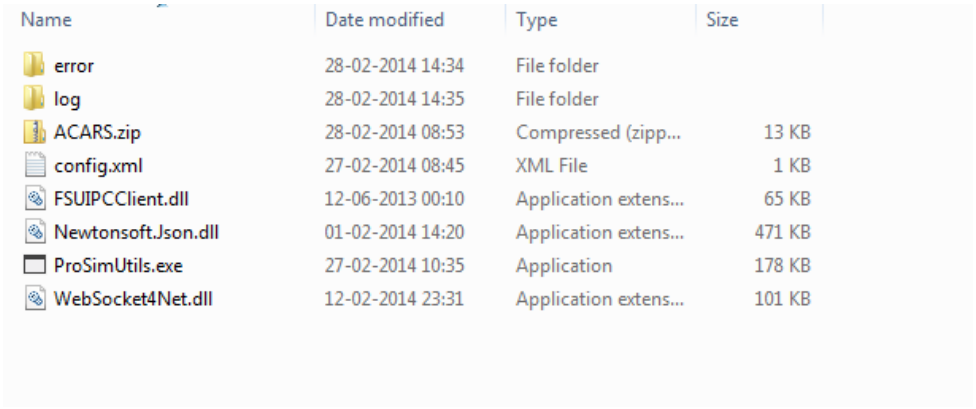

Fig 7.10.2.a

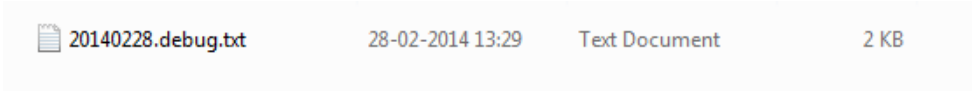

Fig 7.10.2.b

8. Support

This application is provided “AS IS”. For support use the ProSim737 forum at http://prosim737.com/forum or email to prosimutils@hotmail.com.

When reporting a bug, always send the log file and debug file (if any) for faster understanding of the problem and any other pertinent information to replicate the issue.

8.1 Q&A

Q: When starting the application, the WEBSERVER status remains red and there is a log entry: WEBSERVER | ERROR | Could not start server: Access is denied

A: Run the application with elevated privileges (Run as administrator).

Q: I get IVAP red in the server window (IVAP window not found).

A: ProSimUtils will not replace the IVAP client. It will interact with IVAP. Both ProSimUtils and the IVAP window must be in the same PC. It is recommended to use IVAP in multi PC mode, with its own window. I tested ProSimUtils with IVAP in single PC mode with success, but it may vary from system to system.

Q: I see that ProSimUtils 1.1.0 requires ProSim737 version release 1.36b8. What happens if I don't have that version?

A: ProSimUtils will use some newer ProSim737 capabilities like the push message. This will make ProSimUtils 1.1.0 usesless if you use an older version

Q: I don't see those new pages in the CDU.

A: Make sure you have myCustom selected in ProSim->Configuration->ACARS

9. Disclaimer

The developer cannot be held responsible and cannot accept any liability for any consequential incidental or system damage whatsoever due to failure, improper operation or misuse of this program. No warranty is expressed or implied under any circumstance.

ProSimUtils uses the following 3rd party files/programs

- FSUIPCClient.dll (version 1.4.0.0) by Paul Henty
- WEBSOCKET4NET.dll (version 0.8.0.0) by Kerry Jiang
- Newtonsoft.Json.dll (version 6.0.1.17001) by James Newton-King
- Ionic.Zip.dll (version 1.9.1.8) by Dino Chiesa

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FSUIPC & WideFS are pay ware programs by Peter Dowson.

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This software is not associated with or endorsed by Boeing and/or any avionics systems manufacturer. It is designed purely for use with flight simulation software and ProSim737 only.

Your feedback, suggestions and ideas for improvements are welcome: prosimutils@hotmail.com

10. Future

ProSimUtils will be updated with new features or modules as they are requested or needed.

10.1 Modules

10.1.1 FDR (wip)

This module will act as a Flight Data Recorder to save the flight into a data file (text based).

The data file can be exported to a KML file to be viewed with Google Earth.

10.1.2 VATSIM (wip)

This module is no longer a “maybe”. It will be implemented in two stages. The first with ATIS/Weather retrieval and the second to control the pilot client interface.

10.1.3 Time Log and Maintenance

This module will log flight hours and create failures in several systems if the aircraft is not taken to maintenance.

10.2 Functions and Features

10.2.1 Default web page (wip)

ProSimUtils web server will provide a default web page with a help and all available links.

10.2.2 Injection of AI traffic

ProSimUtils will have the capability to inject TCAS traffic into the Flight Simulator.

10.2.3 Flight MAP

A flight map will be created to display all users flying with ProSimUtils

11. Additional Information

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